amateur radio

Vol. 34, No. 6
JUNE
1966

25c

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NEW WELWYN INSULATED METAL OXIDE

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Wire Wound.

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5	12	30c	50	450	$1.35
5	18	35c	64	6	35c
8	10	30c	64	18	35c
8	15	30c	100	3	35c
8	350	48c	100	6	35c
8	525	58c	100	12	35c
10	3	30c	100	25	50c
10	6	30c	100	50	72c
10	15	35c	100	100	75c
10	25	35c	100	200 Can	$1.05
16	10	35c	100	300	$1.53
16	300	50c	100	350 Can	$1.60
16	525	75c	125	3	35c
20	200	62c	150	150	75c
24	350	65c	200	25	65c
24	500	97c	200	50	90c
25	3	32c	250	3	50c
25	6	35c	250	6	55c
25	12	35c	250	16	55c
25	18	35c	250	25	75c
25	25	35c	250	50	95c
25	50	45c	500	12D	50c
25	300	62c	500	25	88c
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	10/-	$1	2N270	13/6	$1.35
AF116N	9/6	95c	2N370	19/-	$1.90
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BC108	10/-	$1	OA79	4/-	40c
BC109	14/-	$1.40	OA80	3/-	30c
OC26	26/-	$2.60	OA81	3/-	30c
OC35/AT1138A			OA90	3/3	32c
	35/-	$3.50	OA91	3/3	32c
OC44N	11/-	$1.10	OA95	3/3	32c
OC45N	11/-	$1.10	OA200	7/6	75c
OC70	12/-	$1.20	OA210, 1N1763, 1N3194 HR25	8/6	85c
OC71/2N215	7/6 or 3 for £1 75c or 3 for $2		OA211, S10AR2	16/-	$1.60
OC72	13/6	$1.35	1N3491 50 p.i.v. 18 a.	9/6	95c
OC74N	9/6	95c			
OC75	13/6	$1.35			

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OAZ212	12/6	$1.25
OAZ213	12/6	$1.25
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TO2	Output, 97 ohm c.t., 3.5 ohm 1 watt	18/6	$1.85
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"AMATEUR RADIO"

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FEDERAL COMMENT

★

A FABLE FOR AMATEURS—WITH A MORAL

Last century there were two very small kingdoms, Manx and Utopia, both of which bordered the much larger kingdom of Gargantua. King Otto of Manx and King Paramount of Utopia were firm friends as were their fathers before them. Peaceful relations had existed between the two countries for centuries and as far back as man could remember, a mutual defence treaty had existed between Manx and Utopia. This bond had been a strong deterrent to the ambitious policies of the King of Gargantua, who cherished dreams of taking over the two smaller countries, thus adding to his domain.

Otto and Paramount both enjoyed the same hobby—the breeding and raising of white cats with pink eyes. Their subjects had also become enthusiastic about this hobby and new and better methods of improving the breed were constantly exchanged between the two countries.

But it came to pass that a bright young man in Manx developed a new strain of white cat—one with green eyes. The Manx king soon disposed of his pink-eyed cats and devoted his efforts to the improvement of the green-eyed breed, as did his subjects. Soon this difference in ideas led to a bitter feud between the two kings—and the two kingdoms. As the rivalry increased, friendships crumbled. There was name calling and border incidents became numerous. Soon the armies of both countries were massed along the frontier, ready to attack—the mutual defence treaty was forgotten.

Today Manx and Utopia are no more. The Ambitious King of Gargantua had no difficulty in defeating the divided armies of the two tiny kingdoms and annexing their lands. Cats are now forbidden in these areas.

There is a moral in the foregoing story for us—the Radio Amateurs of Australia. Let us not become divided amongst ourselves over relatively petty differences. Amateur Radio means different things to different people. Respect the other fellow's major interest and don't resort to name calling if his ideas don't coincide with yours. Most of all remember that the Amateur in this country is represented by the Wireless Institute of Australia and even if you have a legitimate complaint against the W.I.A., you will achieve nothing by dropping your membership and loudly proclaiming your intense dislike of the Institute to all and sundry. Yes, you may hurt the Institute a little, but it will still outlast you—more important you hurt the Amateur fraternity as a whole by dividing members one against the other. The probable result is summed up in our fable. Be positive in your approach. If you have a grouch take office in the Institute and attempt to rectify what you consider to be wrong. You are then doing all Amateurs, including yourself, a service.

—D. H. Rankin, Federal Activities Officer, W.I.A.

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In one gloriously successful year, thousands of JOYSTICKS have been sold to stations throughout the world. PARTRIDGE ELECTRONICS have been inundated with testimonials from JOYSTICK users. Orders for this revolutionary (pats. pend.) variable frequency antenna system have so multiplied that new premises have been leased in order to cope with demand. ALL JOYSTICK orders are now despatched immediately.

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De Luxe JOYSTICK SYSTEM	**$26.40** + $0.62	$0.82	$1.12
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DX-Magnet ,, ,,	**$20.10** + $0.42	$0.52	$0.72
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HT45—S.S.B. Linear Amplifier	£157	0	0	plus 12½% tax
CB3A—5 watt 27 Mcs. Transceiver	£65	0	0	plus 12½% tax
CB8—1 watt 27 Mcs. Transceiver	£47	0	0	plus 12½% tax
80 Mcs. 50 watt mobile or base Transceiver. Latest 6 channel extra narrow band	£195	0	0	plus 12½% tax

GALAXY

Galaxy 3 Triband Transceiver	£202	0	0	plus 12½% tax
Galaxy 5 All band Transceiver	£250	0	0	plus 12½% tax
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Heathkit HW22—40 m. Transceiver, secondhand, with triband modification kit, £95.

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TWO-UNIT PYE BASE STATION CONVERSION

ROGER L. HARRISON,* VK3ZRY

THESE units are the old a.m. base stations which have recently appeared on disposals in small numbers. The conversion presented here is for six metres a.m. net frequency (53.032 Mc.).

TRANSMITTER CONVERSION

The transmitter runs an 832A in the final or a QQE04/20. Both tubes are identical. The driver is generally a 6AQ5, and a 6AM5 or 6AU6 is used in the oscillator. The transmitter conversion is easy and quite straightforward. The coils are easily located under the chassis; no trouble should be experienced in locating them. Remove all the original coils and replace, one at a time (to remember the connections) with the following coils:

Oscillator Anode Coil. Rewind 14 turns of 26 B. & S. enamelled wire. This should resonate to 26.5 Mcs.

Driver Anode Coil. Wind 4 turns, ¾ in. inside diameter of 18 s.w.g. enamelled wire. Refer to Fig. 1.

P.A. Grid Coil. Wind 8 turns, 18 s.w.g. enamelled wire, ¾ in. diameter centre tapped. Refer to Fig. 2.

P.A. Tank Coil. Wind 11 turns, ¾ in. inside diameter of 18 gauge B. & S. enamelled wire. Refer to Fig. 3.

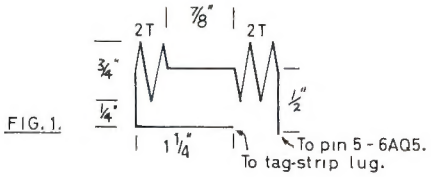

FIG. 1.

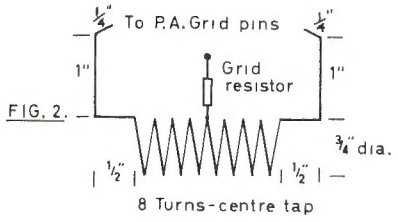

FIG. 2.

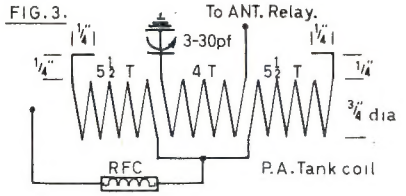

FIG. 3.

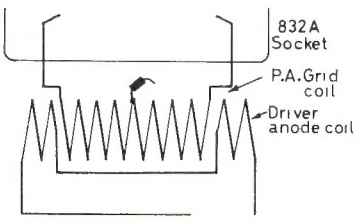

FIG. 4.

* 1 Mary St., North Balwyn, E.9, Vic.

Output Link. Wind 4 turns, ¾ in. inside diameter of 18 gauge B. & S. enamelled wire. A 3-30 p.F. Philips trimmer is in series with the earthy end. Refer to Fig. 3.

Note that the p.a. grid coil is mounted inside the driver plate coil to achieve tight inductive coupling. (See Fig. 4.)

There is no conversion needed on the audio section except that the microphone you desire to use may not suit the unit. If so, then I leave it up to the constructor to make his own arrangements, as ideas and methods on this subject will vary widely. The tune-up procedure I will leave till later, as this should be attempted after receiver conversion.

RECEIVER CONVERSION

This will almost be the same as per the article in "A.R.," November, 1965. I used a different crystal than that specified in the article, and noticed a few differences. The conversion presented here is that to suit an 11,186.4 Kcs. crystal.

Coils: The coil data is as follows (see Fig. 5):—

L1=11 turns, tap 2½ turns from earth, 20 B. & S. enamelled.
L2=7 turns, 20 B. & S. enamelled.
L3=6½ turns, 20 B. & S. enamelled.
L4=5 turns, 20 B. & S. enamelled.
L5=11 turns, 26 B. & S. enamelled.

Mute Circuit: Next to the mute relay you will find two capacitors mounted side by side as shown in Fig. 6. Remove the one towards the back of the chassis—this improves the sensitivity of the mute. Also remove the 4.7K ohm resistor and change the 10 ohm to 39 ohm resistor.

Alignment: This will be the same as in "A.R.," November, 1965, except that for an 11,186 Kcs. crystal the 1st i.f. will be 14.0864 Mcs. The 1st i.f. transformer (T1) will tune to this easily.

To align the receiver you will find it necessary to connect the terminal on the back of the chassis marked "Relay" to the "E" (earth) terminal. Also connect the 3 ohm terminal to the LS terminal. You will also find it necessary to turn the mute control fully anti-clockwise. The two pots mounted on the chassis are r.f. gain and a.f. gain; these should be turned fully clockwise.

Mute Adjustment:

1. Turn on receiver.
2. Turn mute control fully anti-clockwise.
3. Allow receiver to warm up until the mute relay opens and noise is heard.
4. With antenna connected to unit and noise coming through, turn mute control clockwise slowly until the mute relay is heard to just drop out. This is the most sensitive position of the control. The meter on the front panel will probably read. Don't worry, as this is only a visual indication of when a signal is present when the monitor switch is turned down.
5. DO NOT advance the control any further as this reduces the sensitivity of the mute. If this occurs, return the pot to fully anti-clockwise and repeat the procedure.

It was noted that after about another 20 minutes or so the mute would open of its own accord. Re-setting the mute control will restore order.

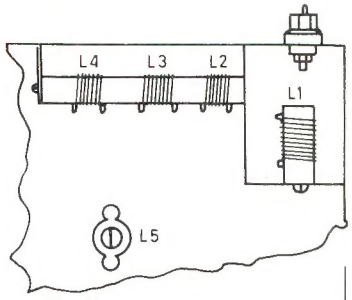

FIG. 5.

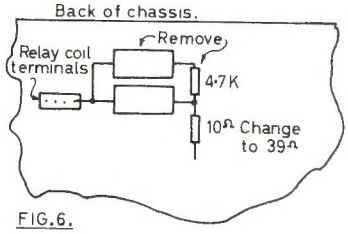

FIG. 6.

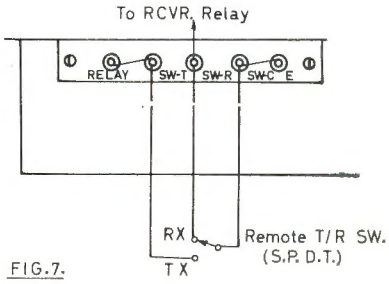

FIG. 7.

TRANSMITTER ADJUSTMENT

Before commencing the transmitter tune up the terminals on the back left-hand end (below power trannie) should be connected as follows:

1. SW-C to E.
2. Relay to SW-T.

On the right-hand back terminal board:

1. E to INPUT.
2. One side of mic. to INPUT.

Before commencing tune-up a proper antenna should be connected to the Tx. An in-line r.f. indicating device such as an s.w.r. meter should be used to monitor r.f. output.

For tune-up, toggle switch at back of chassis should be up;

For operation and modulation checks it should be down.

The tune-up procedure is as follows:

1. Turn meter switch to G1.
2. Turn on Tx and peak oscillator anode coil for maximum reading.

(Continued on Page 5)

GELOSO V.F.O.

Model 4/104 V.f.o. Unit. Tunes 80, 40, 20, 15, 11 and 10 metres. Uuses 6CL6 and 5763 valves. **Price** (valves extra), **$24.60.**

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Notes on Circuit Application of Geloso V.f.o. Units available upon request.

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1-16	½ in.	16	3 in.	No. 3003	$0.55
2-08	⅝ in.	8	3 in.	No. 3006	$0.66
2-16	⅝ in.	16	3 in.	No. 3007	$0.66
3-08	¾ in.	8	3 in.	No. 3010	$0.76
3-16	¾ in.	16	3 in.	No. 3011	$0.76
4-08	1 in.	8	3 in.	No. 3014	$0.86
4-16	1 in.	16	3 in.	No. 3015	$0.86
5.08	1¼ in.	8	4 in.	No. 3018	$1.05
5-16	1¼ in.	16	4 in.	No. 3019	$1.05
8-10	2 in.	10	4 in.	No. 3907	$1.38

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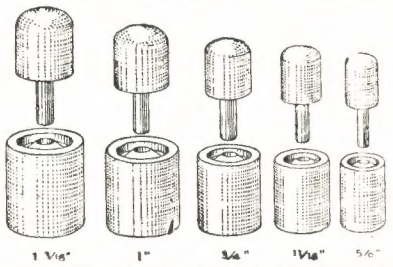
(equiv. B. & W. No. 3907-7 in.)

7 in. length, 2 in. diam., 10 t.p.i., $2.45.

References: A.R.R.L. Handbook, 1961; "QST," March, 1959; "Amateur Radio," Dec., 1959.

"WILLIS" CHASSIS PUNCHES



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7/16 in.	,,	$2.20	1¼ in.	,,	$4.80
⅝ in.	,,	$2.40	1⅜ in.	,,	$5.20
11/16 in.	,,	$2.60	1½ in.	,,	$5.60
¾ in.	,,	$2.80	1⅝ in.	,,	$6.00
⅞ in.	,,	$3.60	1¾ in.	,,	$7.20
1 in.	,,	$3.60	2 in.	,,	$8.00

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1 in.	$3.67	2-2/32 in.	$7.22
1-1/16 in.	$3.67	2½ in.	$8.57
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The "Q-Max" range of Screw Type Chassis Cutters serve a most useful purpose where holes are to be punched on chassis where components are already mounted. The SQUARE and RECTANGULAR punches save the hard work involved in transformer, plugs and sockets, I.F.'s, etc., cut-outs.

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Type 4/112 for use with single ended tubes type 6146, 807, etc.

Both Types, **Price: $3.95** (inc. S.T.)

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UM3	125-watt Audio	$29.70

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GELOSO KIT FOR D.S.B. TRANSMITTER

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4/105 Crystal controlled Beat Frequency Oscillator	$28.12
N.1657 Calibrated Dial, Pointer Escutcheon	$6.33
N.4/113 Pi-Coupler	$4.84
N.771 Condenser	$4.44
N.774 Condenser	$4.44
N.17634 All Wave R.F. Choke	96c

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Valves not supplied with V.F.O.

Valves for V.F.O.: 6U8, 6AH6, 6CL6.

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PL259 Colaxial Plugs, suit ⅝ in. cable	$0.98
S0239 Co-axial Sockets	$0.99
UG175/U and UG176/U cable Adaptors for use with PL259	$0.31
C32-16 Right-angle co-axial connector Jack to Plug, suit PL259	$1.88
C32-17 T. Connector—Plug and two Jack Ends—suit PL259	$2.33
C32-14 Coupling for two PL259 Plugs	$1.32
Belling & Lee L734P Co-ax. cable plug	$0.32
,, ,, L604S co-ax. chassis-socket	$0.28
,, ,, L603/B co-ax. chassis socket ground insulated	$0.25
,, ,, L734/S recessed co-ax. chassis socket	$0.25
,, ,, L734/J co-ax. cable socket	$0.13
,, ,, L1421 Bulk-head cable socket	$0.56
,, ,, L616 Coupling — couple two L734/P plugs	$0.36
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RG58AU 50 ohm co-axial cable, per yd.	$0.35
PT91M (UR57) 72 ohm co-axial cable, per yd.	$0.55
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Coil Ratings: 6, 12, 24 volts d.c. at 2 watts. 6, 12, 24 volts a.c. at 6va., 50-60 cycles. Special coil voltages available on request.

R.f. Ratings: Ikw. power rating to 500 Mc.; 20 watts power rating to 500 Mc. in types DK60-G and DK60-G2C in de-energised condition. The DK60-G and DK60-G2C have a special isolation connector in the de-energised position to reduce cross-talk to a minimum.

V.S.W.R.: Less that 1.15:1 from 0 to 500 Mc. (50 ohm load).

Isolation: Greater than 60 db. at 10 Mc. in DK60 and DK60-2C; greater than 100 db. from 0 to 500 Mc. in DK60-G and DK60-G2C when in energised position.

Operating Time: Less than 30 milliseconds from application of coil voltage; less than 15 milliseconds between contacts.

Connections: Standard SO239 type v.h.f./U.h.f. Co-ax. Connectors. Available with Type N, BNC, TNC and C Connectors to order. $4.16 extra.

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3. Turn meter switch to G2 and peak 6AQ5 anode (trimmer on top of chassis) for maximum reading.

4. Turn meter switch to p.a. and tune for a dip. Adjust the coupling and tuning of the output link for maximum r.f. out. Retune p.a. tuning for a dip. Now check modulation by turning meter switch to mod. and make sure that it kicks to about 100% or a bit more on peaks. If not, keep adjusting link coupling and tuning as well as p.a. tuning until a good compromise between r.f. output and modulation is reached.

5. Adjust the modulator gain (pot. near 6SN7) to suit the microphone you use.

INTERCONNECTING UNITS

When both the transmitter and receiver are working to your satisfaction mount them in the cabinet and connect the terminal marked RELAY on the back of the receiver (previously connected to earth) to the SW-R terminal on the left-hand board on the back of the transmitter chassis. Connect, via coaxial cable, the socket marked RE to the aerial socket on the receiver. Check that the receiver relay drops out when you press the transmit key.

REMOTE CONTROL OF UNIT

Transmitter: Connect SW-T, SW-R and SW-C as in Fig. 7.

Receiver: Remove connection between 3 ohm and LS terminals. Then connect as shown in Fig. 8.

Well, that's about the lot; hope your unit works like the one I converted. Any queries shoud be addressed to me, including an s.a.s.e.

NOISE LIMITER FOR MOBILE USE

*DAVID PRIESTLEY**

In normal communications receivers the noise is generated within the set itself by the valves, poor type resistors and condensers, etc. The only effective way this noise can be overcome is to use high quality parts and low-noise valves, or more in keeping with our modern times, transistors.

However, this noise limiter which I am reviewing is more for the types of noise encountered by the Amateur or s.w.l. with mobile receiving equipment. A classical example of this is the interference radiated by the ignition system of a car. The pulses from the ignition system are of high intensity but short duration, the time between pulses being greater than the actual duration of the pulses themselves. Even so, we all know the nuisance such pulses cause to us while trying to copy weak signals not only from the engine of our own car but the other vehicles using our overcrowded roads.

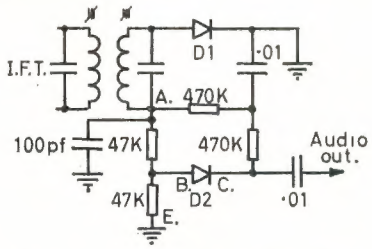
Electric motors cause considerable noise to be fed into radio receivers, as do the high tension wires which span our roads every few miles or so.

When an r.f. carrier is received by the set, the detector diode D1 conducts on alternate half-cycles making A negative with respect to E. AE is a conventional diode load consisting of two 47K ohm resistors in series. The potential difference between A and E is proportional to the strength of the carrier.

The 100 pF. capacitor in parallel with the diode load offers a low impedance to radio frequencies. Therefore if the strength of the carrier varies at audio rate, the voltage appearing across AE will also vary at an audio rate.

Point A in the circuit is the usual take-off point of our audio output so in effect we have put the noise limiter in series with our detector stage and the audio output stage.

There is a negative voltage appearing between point D and earth but it cannot vary at an audio rate because of the high value of the resistance between A and D and the presence of the 0.01 μF. capacitor. Therefore the voltage between D and earth is simply equal to the voltage between A and E.



While all voltages in the circuit remain equal, our diode D2 will conduct audio signals to the audio amplifier because the anode is positive in respect to the cathode. Should, however, a sudden audio pulse appear across BE which is greater in amplitude than the average voltage across AE, the anode of the diode will become negative with respect to the cathode and the pulse will not be transferred to the audio amplifier. In point of fact, any signal appearing at point B that is not varying at audio rate will be rejected.

One disadvantage of this noise limiter is that when mobile and someone comes on the air to call on c.w., because of the facts already outlined, D2 will not conduct immediately and therefore somewhat clipped c.w. is the result. For this reason, and this reason only is switching necessary.

In my own mobile receiver I have used this noise limiter with first-class results and haven't even bothered to switch it in and out.

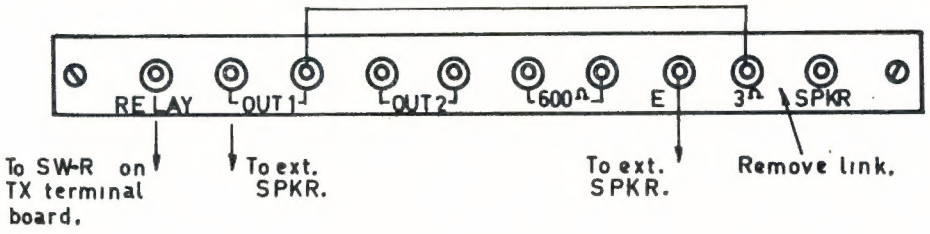
All resistors can be ⅛ watt type and the capacitors of low voltage variety. This has the added advantage of giving a small piece of foreign equipment to be added to your already overcrowded mobile receiver. In fact, with careful layout this can be made on a piece of matrix board one inch square with plenty of room to spare.

The diode I used was an OA202 for this reason. This type of diode requires a small voltage to "fire" it, and when no signals are coming through, the diode will not conduct, but the instant any signal comes on the air, the diode passes it. This in effect gives a mild form of muting.

The gentleman to whom the credit belongs for passing this to me is Les Jenkins VK2ZBJ.

* 8 Rickard Road, Warrimoo, N.S.W.

(A.) For 3Ω Remote speaker.



(B.) For 600Ω Remote speaker.

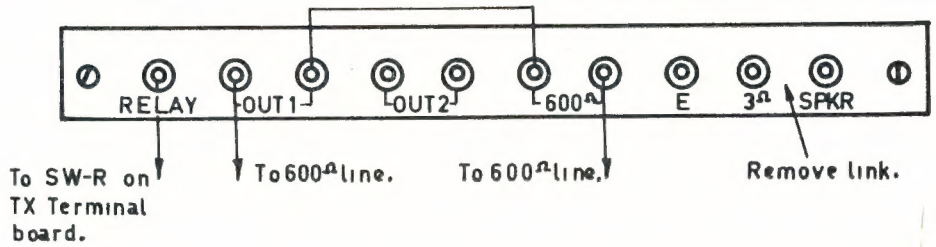
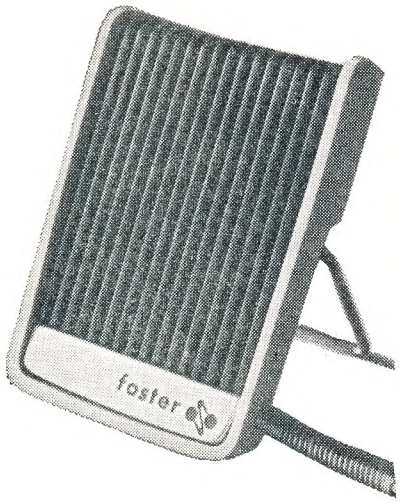


FIG. 8.

AMATEUR FREQUENCIES:
USE THEM OR LOSE THEM!



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SPECIFICATIONS:

Output Impedance .... 50 ohms or 50K ohms
Effective output level .... —55 db. [0 db. = (one) 1V. Microbar]
Frequency response .... 200 to 10,000 c.p.s.

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Plastic Diaphragm.

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OUTLOOK JAN.-FEB. 1966		PT5755
ELEC. AUST. APRIL 1966	Protected DC Supply	PT2150
ELEC. AUST. APRIL 1966	3 Band Double Change Receiver	PT2062 Z3040 OT E7/15
ELEC. AUST. MARCH 1966	Playmaster 113 Stereo Power Amp.	PT5721 PT TD19 (2 req'd)
ELEC. AUST. FEB. 1966	A Four Channel Audio Mixer	PT2150 (for AC Supply)
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ELEC. AUST. JUNE 1965	A Two Band Short Wave Converter	PT5890
ELEC. AUST. DEC. 1965	A Simple Public Address Amp.	PT1993 OT E7/15
ELEC. AUST. OCT.-NOV. 1965	Playmaster Program Source	PT1993
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SOME THOUGHTS ON HANG A.G.C. SYSTEMS*

CHET OPAL, K3CUW

THE many variations of Goodman's hang a.g.c. circuit[1] which have appeared in "QST" over the last eight years attest to the popularity of this type of automatic gain control for s.s.b. and c.w. reception. Unfortunately, the circuits used tend to be somewhat complicated and many Hams may be reluctant to use them, particularly since no suggestions are given as to how to adapt the systems to one's particular needs. My purpose here is to present a set of modifications applicable to any of the "hang" systems and, for the most part, to the simpler fast-attack slow-decay circuits now popular in commercial gear. The modifications include a circuit to prevent the a.g.c. from hanging up on isolated noise pops, and the addition of a cathode follower so that the a.g.c. line may be used for other purposes such as receiver muting or manual gain control. Methods of adapting gain-controlled amplifiers for good performance under fast attack a.g.c. conditions are also discussed.

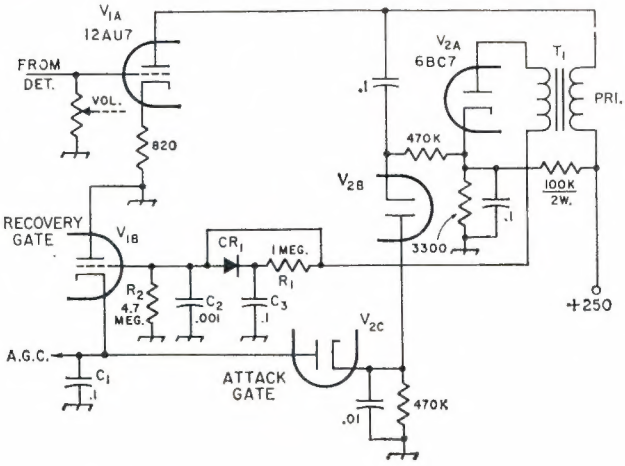

Fig. 1.—Audio "hang" a.g.c. modified for immunity to noise "pops." The circuit is the same as the original except for C2, CR1 and R1. All capacitances are in μF.

CR1—200-p.i.v. silicon diode.
T1—1:3 audio transformer.

A slightly modified version of the hang a.g.c. system described by Luick[2] is shown in Fig. 1 and is typical of all circuits used. This particular version is audio driven, but circuits which obtain driving voltage from the i.f. amplifiers are quite similar. The important thing is that all selectivity precede the point at which the a.g.c. driving voltage is taken off. The systems work best when used with a receiver with good skirt selectivity and which recovers quickly when overloaded (that is, with a good receiver).

The circuit shown here works basically as follows: Audio is picked off the receiver volume control[3] and amplified in V1A. Part of the result is rectified in V2B, filtered, and dumped on to C1 through V2C. C1 will thus charge up immediately to the peak of the audio voltage appearing on the plate of V1A and will stay at that voltage until discharged through V1B. The resulting negative voltage is applied to the grids of the i.f. tubes to reduce the gain of the receiver. There should be no d.c. return to ground on the a.g.c. line itself or the a.g.c. voltage will not "hang" properly. The audio is stepped up in T1, rectified in V2A, and the resultant negative voltage is applied to C2 (ignoring CR1 for the moment) to cut off V1B. Because of the voltage gain in T1, the voltage across C2 is considerably more negative than that across C1, and V1B will not conduct again until C2 discharges through R2. As a result, the a.g.c. voltage will hang at a voltage proportional to the peak amplitude of the signal being received for a length of time determined by the step up in T1 and the time constant R2C2 (usually chosen to be about a second). The voltage divider in the cathodes of V2A and V2B puts a back bias on these diodes and sets a threshold below which the a.g.c. will not operate. The actual values in this divider will depend on the particular receiver and the noise conditions on the band in use. It would be advisable to make the threshold adjustable temporarily, as shown in Fig. 2. After the a.g.c. has been in use for a while, a good compromise value could be determined and a fixed resistor substituted if desired.

IMMUNITY TO NOISE POPS

From the above description it is evident that a sudden noise peak will cause the a.g.c. to hang. Since man-made noise caused by electrical appliances or a v.f.o. swishing across the band can have a much higher peak amplitude than the signal being received, this will cause a one-second hole in the message before the a.g.c. returns to its normal operating point. The addition of a diode, resistor, and capacitor in the grid of V1B to correct this condition is shown in Fig. 1. The signal peak is fed directly through to C2, but as this capacitor is smaller by a factor of a hundred than the one normally used, the a.g.c. will only hang for about 10 milliseconds. The audio is fed to C3, but this capacitor must charge through a 1-megohm resistor and hence will not reach full voltage until several s.s.b. peaks, or at least 100 milliseconds on c.w., have gone by. When C3 is finally charged, CR1 conducts, placing C3 in parallel with C2, and the a.g.c. switches over to the full 1-second hang mode. Occasional pops will be filtered out; but a static burst, which would have blotted out a large part of the message anyway, will still cause the a.g.c. to hang for the full second. The values shown worked equally well with a 200-c.p.s. c.w. bandwidth or a 3-Kc. s.s.b. bandwidth, al-

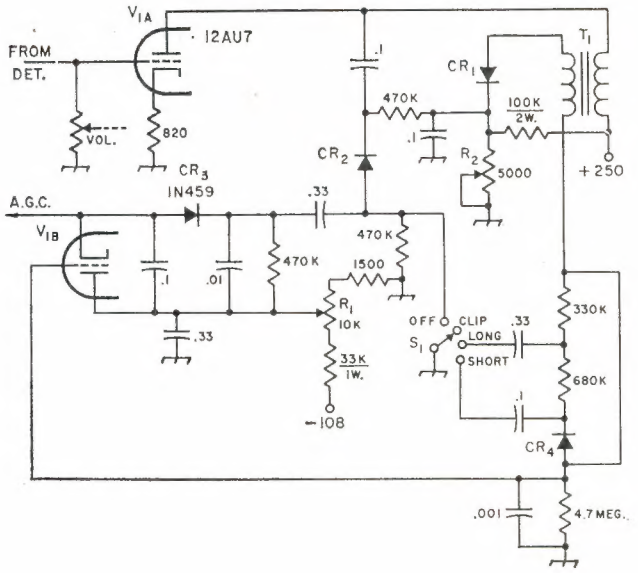

Fig. 2.—Further evolution of the a.g.c. circuit with "Sensitivity" (R1) and "Threshold" (R2) controls added. The function switch, S1, select 10-ms., 3-second and 1-second "hang" times.

CR1, CR2, CR4—Bargain silicon diodes.
CR3—High back resistance silicon diode. (1N459 or equiv.)

* Reprinted from "QST," December, 1965.

[1] Goodman, "Better A.G.C. for S.S.B. and Code Reception," "QST," January, 1957.

[2] Luick, "Improved A.G.C. for Sideband and C.W.," "QST," October, 1957.

[3] If the audio becomes distorted when this connection is made, there is a clipping taking place in V1A and the audio take-off point should be moved closer to the detector. Two or three volts audio on a strong signal is more than adequate at the grid of this tube.

though if sideband only operation is contemplated, a resistance smaller than 1 megohm could be used. If the short time-constant mode is used alone, the circuit will behave like a clipper to keep ear-splitting signals in line while returning the receiver to full gain, when possible, to make sure that no weak signals are missed. The clipping introduces no harmonics on c.w. and very little distortion on sideband, consequently it is more comfortable to listen to than conventional audio clipping.

I.F. AMPLIFIER CONSIDERATIONS

The a.g.c. voltage comes on in a millisecond or less and will cause an irritating "thunk" when it comes into play unless the gain of the i.f. amplifiers can be changed at least as quickly. Unfortunately, the usual i.f. wiring is inadequate in this respect. The grids are decoupled from the a.g.c. line with large resistors and bypass capacitors; the result is a delay of as much as 1 millisecond between the time the a.g.c. is applied and the time it reaches the grids of the amplifiers. The response may be speeded up by replacing the grid resistors with small r.f. chokes and by removing any other resistors in the line. If instability resists, shielded wire, bypassed at strategic points, can be used for the a.g.c. bus. The cathodes and screens of the gain-controlled tubes are not normally bypassed for audio, causing poor performance while the gain is being changed. If popping persists on attack even after grid resistors are removed, the grids and screens should be bypassed with 0.1-μF. or larger capacitors, or better still, the cathodes may be grounded and the screens run off a stiff d.c. supply. Operating bias may then be obtained through the a.g.c. line (see below). This modification should also improve the cross-modulation performance of the amplifiers, although in present-day receivers most of the damage has been done long before the first i.f. tube.

ADDITIONAL MODIFICATIONS

I am presently using the circuit shown in Fig. 2 to generate the a.g.c. voltage. A switch to turn the a.g.c. off and to select various time constants has been incorporated, along with "sensitivity" and "threshold" controls. The negative 108-volt supply[4] is an inconvenience, but if the cathodes are to be grounded some source of negative voltage will be required. As will be seen later, the supply is used elsewhere. The sensitivity control adds a fixed bias to the a.g.c. voltage and is best used if the threshold control is incorporated permanently into the receiver. Otherwise, the a.g.c. line may be clamped at some minimum negative value as shown in Fig. 2.

LOWERING THE IMPEDANCE OF THE A.G.C. BUS

A simple cathode follower will isolate the hang capacitor C1 from the a.g.c. bus as shown in Fig. 3. The old S-meter amplifier tube may be used for V3A since the meter can now go directly to the a.g.c. line. The plate of this tube must go to a stiff 20 to 250-volt supply. Now that the line can have some resistance to ground, the a.g.c. bus may be used for all sorts of auxiliary gain controls. Diodes CR5-8 select the most negative voltage appearing at their cathodes and apply it to the a.g.c. line. Good muting for c.w. break-in with grid-block or differential keying is obtained by keying a 2N398A in step with the v.f.o. The base current divider on this transistor should be adjusted so that the transistor conducts when the v.f.o. is cut off and opens just as the v.f.o. comes on (this does not necessarily occur when the v.f.o. grid voltages goes to zero). If the station receiver has an output stage with the cathode resistor bypassed by an electrolytic capacitor, its cathode is a good source for the 6 volts or so required to cut off the transistor.

It is often desirable to operate the r.f. amplifier at full gain for all but the strongest signals. The circuit shown in Fig. 3 to apply delayed a.g.c. to the r.f. amplifier is nothing new, but it cannot be used without the cathode follower isolation stage. The 10-volt Zener diode worked with my receiver: if no more than two i.f. amplifiers are controlled, the value should be reduced to about 6.8 volts.

The S meter in the circuit as shown will indicate full scale with —24 volts on the a.g.c. line. It is possible to limit the maximum current by increasing the V3A cathode resistance, and to adjust the meter sensitivity by varying the resistor in series with the meter. If this is too much of a chore, the original "calibrated" S-meter circuit may be left intact and a new tube installed for V3.

FINAL CONSIDERATIONS

I would recommend that the a.g.c. circuit be built on a small chassis mounted inside the receiver cabinet. Shielded wire should be used from the receiver volume control to the grid of V1A; aside from that nothing is critical.

I have used one variant or another of this circuit with break-in c.w. over the last four years and am quite satisfied with the results, although the endless series of modifications has left the audio portion of my receiver a shambles! I hope that enough information has been presented above so that with a little experimentation one can come up with a hang a.g.c. system to suit his specific needs. ●

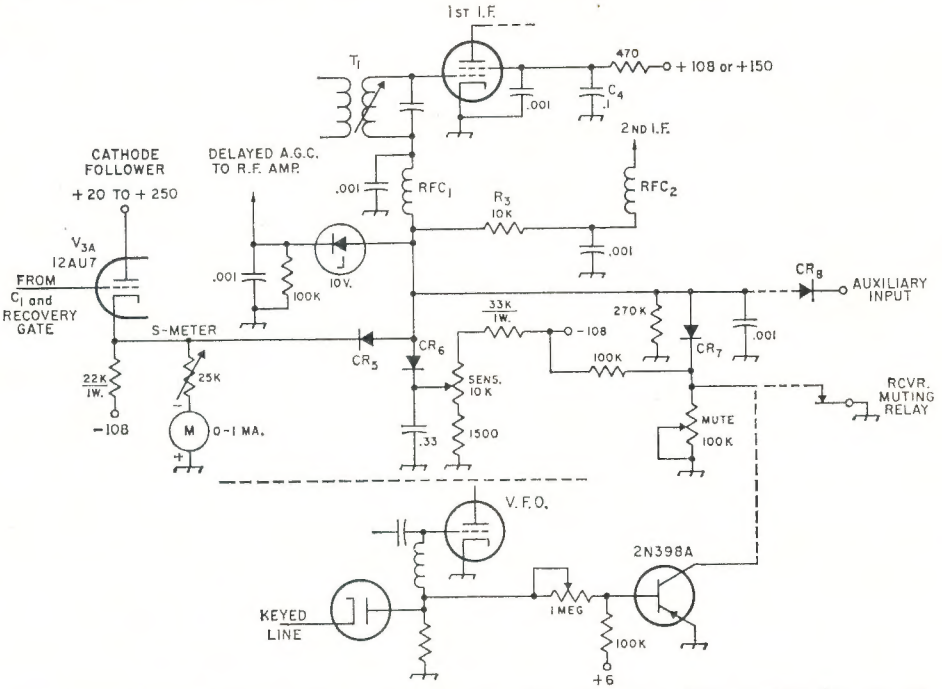

Fig. 3.—A cathode follower may be used to drive the a.g.c. line. This permits the use of additional circuitry for muting or break-in silencing. For example, the receiver can be muted by a negative voltage applied at "auxiliary input," by a "receiving muting relay," or by a negative voltage from the transmitter keying circuit applied via the 2N398A transistor. Delayed a.g.c. to the receiver r.f. amplifier is obtained by using a Zener diode. The time constants in the a.g.c. circuits have been reduced by substituting r.f. chokes for resistors (RFC1, RFC3).

C4—Audio bypass. May be omitted if screen voltage is stabilised.

CR5-CR8—Bargain silicon diodes.

R3—Grid filter resistor; omit if possible.

[4] The negative supply need not be 108 volts, but it should be high enough that a full range of gain control can be obtained.

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1966 JOHN MOYLE NATIONAL FIELD DAY RESULTS

It was with anticipation that the Contest Committee altered the rules of this Contest in an endeavour to encourage more operators in to the field. The results show that approximately the same numbers participated as in previous years.

As most comments received, praised the rules, 1967 rules will only be modified slightly, by the possible addition of "cross mode operating is permitted."

The table of results has been produced from information gleaned from the logs, and is as accurate as possible. A well laid out front sheet, as required by the rules of all Contests is a great help to the Committee.

With the upsurge in s.s.b. activity, it was decided that if the power restriction was lifted, more stations would participate using s.s.b. transceiver type of equipment. Unfortunately this did not eventuate, as no increase in activity in this sphere was noted. Their non-participation was a sad reflection on their interest in s.s.b., and the money they spent buying portable transceivers.

Reported below are some of the comments attached to logs:—

VK2AAH/P and gang: "The rules are right on the ball now for multiple and single operators."

VK2SS/P expresses satisfaction at the inclusion of a six-hour duration, and the rules and scoring are much what he desires.

VK2YB/P comments that the six-hour period suits single operators who do not want to camp out for the Contest, and that cross-mode operating should be allowed.

VK2JM/P makes many comments on the six-hour period, asks that cross-mode be allowed, and finishes off by saying that the Contest is a worthwhile one.

VK3AWI/P writes that they had nocturnal visitors to their site. Apparently some cows, or bulls, wandered up to their generator and commenced licking it. Perhaps they had been watching t.v. and had seen the ad.: "Light up a . . . ."

VK3HE/P states that he has always been a single operator in the Contest, and regards the six-hour period section an excellent move.

VK3RN/P writes on behalf of VK-3APC club members, who operated in various capacities and groups, saying that the power strike was the cause of a few minutes panic as the alternators to be used in the field were put in grave doubt as to their availability. He finished by writing that, as usual, they learnt a few more lessons, not the least being to check the petrol for water!

VK5WC/P writes how he enjoyed the Contest as much as any F.D. Contest, but was disappointed at the lack of fixed stations. He doesn't see why cross-mode is not permitted. Access to his site was over a severe, bumpy, rock-strewn track, eight miles of the Wirrapa-Pimba Road.

VK5ZF/P states: "New Contest rules are excellent, but registers a strong protest against the use of G.M.T."

An incomplete list (because of lack of information on front sheets of logs) of equipment in use for the Contest is as follows: Type 3, 522, home made, Swan 240, FL100B, ATR2C, No. 19, KWM2, Galaxy 5, Drake, NCX5, No. 122, Command, HRO, BC348, AMR300, Geloso, Eddystone, and Swan. Aerials in use were mostly ground planes on v.h.f., with Vee and long wires favoured for the h.f. bands.

Whereas the six-hour duration section was intended as a continuous period of operation, no penalty was imposed for other forms of time periods. Next year's rules will be clearer on this point, no doubt allowing any number of periods of operating totalling six hours.

As this is a Contest for field operation, this Committee will try various inducements to bring out stations in to the field. If you would like to suggest a means of accomplishing this, the Contest Committee would be pleased to hear from you. —F.C.C.

TRANSMITTING RESULTS

Call Sign	Section	Div. 6 or 24 Hr.	No. of Ops.	Equip. in Use	Power Input	Contacts	Pts.	Certificate For
VK2SS/P	A	6	1	H.B.	9	23	173	Low Pwr. Op./Pt.
4OF/P	A	6	1	Disp.	10	6	39	
5SS/P	A	6	1	Disp.	11	17	155	Low Pwr. Op./Pt.
6ZAG/P	A	6	1	Disp.	10	5	10	
7JF/P	A	6	1	H.B.	20	32	301	1st 6 Hr. Phone
2YB/P	B	6	1	Disp.	11	26	159	Low Pwr. Op./Pt.
2JM/P	B	6	1	Disp.	11	22	171	1st 6 Hr. C.W.
3HE/P	C	6	1	Disp.	5	26	152	1st 6 Hr. Open
4UC/P	C	6	1	Disp.	16	24	151	Low Pwr. Op./Pt.
3YS/P	D	6	3	Comm.	3/120/240	96	539	1st 6 Hr. Mul. Op.
3QZ/P	D	6	4	H.B.	6/10/15	38	206	Low Pwr. Op./Pt.
3RJ	E	6	1	Comm.	25	19	240	1st 6 Hr. Fix. Stn.
5FJ	E	6	1	H.B.	100	9	125	
5WC/P	A	24	1	Comm.	25	49	413	1st 24 Hr. Phone
6MM/P	A	24	1	Comm.	7	12	76	Low Pwr. Op./Pt.
7JO/P	A	24	1	H.B.	6	15	118	Low Pwr. Op./Pt.
2AGI/P	B	24	1	Disp.	7	57	403	1st 24 Hr. C.W.
5ZF/P	B	24	1	Disp.	15	33	265	Low Pwr. Op./Pt.
5ZF/P	C	24	1	Disp.	15	52	352	1st 24 Hr. Open
1ACA/P	D	24	6	H.B. Comm.	100	152	1206	
2AAH/P	D	24	8	H.B. Comm.		730	3969	1st 24 Hr. Mul. Op
2GN/P	D	24	10	H.B. Comm.		196	1218	
2ATZ/P	D	24	3	Disp.	20	61	479	Low Pwr. Op./Pt.
3RN/P	D	24	14	H.B. Comm.		414	2649	
3AWI/P	D	24	10	H.B. Comm.		396	2170	
3AHZ/P	D	24	5	H.B. Comm.		267	1516	
3AAW/P	D	24	5	Disp.	12	42	286	
4CS/P	D	24	4	Disp. Comm.		112	805	
9XI/P	D	24		Comm.		96	583	
2AEC	E	24	1	H.B.		16	225	
2ZO	E	24	1	H.B.		5	65	
3XB	E	24	1	Comm.		71	905	Merit for working No. of Field Stns.
3ANG	E	24	1	H.B. Comm.	20/56	34	390	
3EF	E	24	1			28	340	
5NM	E	24	1	H.B.	30	9	125	
6KH	E	24	1			5	75	
7SM	E	24	1	Comm.		65	950	1st 24 Hr. Fix. St.

RECEIVING RESULTS

L2033	200	1st in Call Area			J. Ross (VK5) ..	880	,,	,, ,,
L3229	995	,,	,,	,,	L5015	465		
L3042	755				L5065	310		
K. Cunningham					L6028 . . .	42	,,	,, ,,
(VK4)	315	,,	,,	,,	L7031	905	,,	,, ,,

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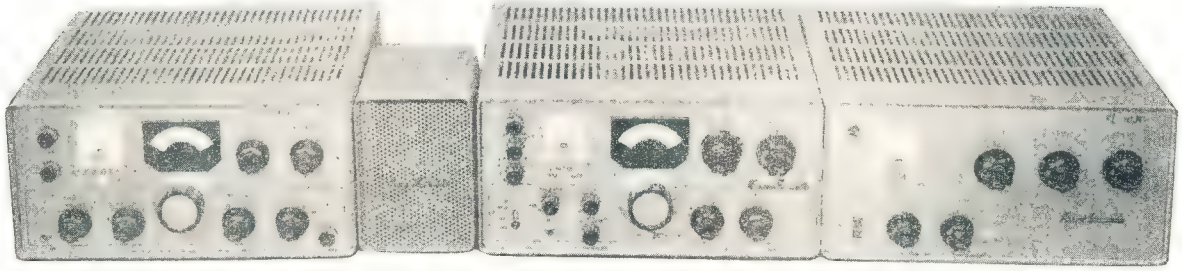

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"Fifty and Over"

By ROY HARTKOPF

"Hello VK3ZFC. Hello VK3ZFC. Hello VK3ZFC. This is VK3ZOM calling you. This is VK3ZOM calling you. This is VK3ZOM calling you. Come in please. Over.

"Hello VK3ZFC. Hello VK3ZFC. This is VK3ZOM returning. Good evening, Bert. Very good signal here. Readability 5, strength 7. By the way you didn't give me a report. VK3ZFC, VK3ZFC. This is VK3ZOM listening for you. Over.

"Hello VK3ZFC, Hello VK3ZFC. This is VK3ZOM returning. The report's the same as last time, you say? And the time before. And the time before that? I suppose it would be, when you come to think of it. After all, we're only a mile away from each other, and I don't suppose the ionospheric conditions would vary much. Of course, I'm only new to radio and wouldn't really know. By the way, Bert, I notice you only say 'ZOM' and 'ZFC.' The instruction book tells us to use our full call signs with the 'VK3' in case someone in another State or overseas is listening. I think we should do what the book tells us, shouldn't we? VK3ZFC, VK3ZFC. This is VK3ZOM listening for you. Over.

"Hello VK3ZFC. Hello VK3ZFC. This is VK3ZOM returning. How far would I expect to get with a 6AK5 as a final on 6 metres? Well one never really knows, does one? There might be something in the ionosphere; or maybe the signal could bounce off a satellite or something. Though I must admit I don't seem to get out as well as I did when I was on higher power last year with the 6J6. When I had that I used to be able to talk to Dave, and he was more than six miles away. But at least I don't get very many t.v.i. complaints nowadays. After all, one must run one's station in the best traditions of radio communication, mustn't one? VK3ZFC, XK3ZFC. This is VK3ZOM listening for you. Come in please. Over.

"Hello VK3ZFC. Hello VK3ZFC. This is VK3ZOM returning. I must say, Bert, that I think your remarks were rather unkind. I know we're entitled to run 150 watts. I know that the t.v. set front ends are twenty megacycles wide and that the six metre band's only a quarter of a megacycle away from Channel zero sound, and that's why I have a 6AK5 for a final. But I'm sure the authorities have the interests of the Amateur at heart and they're doing everything they can to encourage Amateur Radio. After all, we're allowed to talk to each other as often as we like. Oh, that reminds me. Would you tell Jim that . . . oh, I nearly forgot. We're not allowed to pass on messages, are we. Never mind, I'll phone you as soon as we finish and tell you then. VK3ZFC, VK3ZFC. This is VK3ZOM listening for you. Come in please. Over.

"Hello VK3ZFC. Hello VK3ZFC. This is VK3ZOM returning. Really, Bert. You know the instruction book says we shouldn't use that kind of language over the air. And besides I'm sure they mean well and they're doing the best they can. Anyway, suppose we change the subject. How is your Morse practice coming along? VK3ZFC, VK3ZFC. This is VK3ZOM listening for you. Come in please. Over.

"Hello VK3ZFC. Hello VK3ZFC. This is VK3ZOM returning. Yes Bert, I understand how you feel. We're not allowed to use Morse on the air until we've passed the Morse test of 14 words per minute and then of course we'd never use it anyway. It would be nice to be able to use some band below 50 megacycles, but the book says we mustn't do that until we pass the Morse test. I suppose one could pass it if one gave up radio completely for a year or two, but I had to give up radio for five years to get my diploma in communication and if I give it away for another couple of years I"ll forget all I ever knew about it. VK3ZFC, VK3ZFC. This is VK3ZOM listening for you. Come in please. Over.

"Hello VK3ZFC. Hello VK3ZFC. This is VK3ZOM returning. Oh, no, Bert. It isn't like that at all. The diploma course hasn't actually got anything to do with radio. We did lots and lots of things like maths. and chemistry and applied mechanics and physics and even English. There was something about receiving. All bits and pieces. I didn't understand it much but I managed to get through the exam. Of course, it doesn't really matter, because as long as you've got a diploma you don't actually need to know anything. What's that? John wants me on the phone? I'm sorry, Bert, I'll have to go. John's on the phone. VK3ZFC, VK3ZFC. This is VK3ZOM saying thank you for a very interesting contact. 73 and hope to hear you again soon. This is VK3ZOM signing off and clear and VK3ZOM is closing down."

"Hello John. Bowling? Yes, sure. No, I wasn't doing anything. Just the usual talk with Bert. Funny chap. Seems to have a chip on his shoulder. Maybe it's because he takes radio seriously. Yes. I'll be round in five minutes. See you. Bye."

— · · · —

VS9MP, MALDIVE IS.

Stan Butlin commenced activity in October 1965. He runs 80w. on 80, 40 and 20 mx. Uses c.w. and s.s.b. Is on daily, mainly on 20 after 1200z. Easy to pick by those calling him. Excellent op. and QSL is certain, via W2CTN. Stan's home call is G3MRP. He is a member of F.O.C., T.O.P.S. and R.A.F.A.R.S. Equipment used is commercial product, the rx being SR600. Antennae, dipoles. DXCC almost 200. Main object of activity is to give all he can a QSO with Maldive Is. He will be returning to U.K. later this year. QTH is P1921850, Sgt. S. J. Butlin, Sgts. Mess., R.A.F., Gan, Maldive Is., B.F.P.O. 180, C/o. G.P.O., London; or via W2CTN or R.S.G.B.

(Only other activity from this rare spot is the club station VS9MB.)

W.I.A. D.X.C.C.

Listed below are the highest twelve members in each section. New members and those whose totals have been amended will also be shown.

PHONE

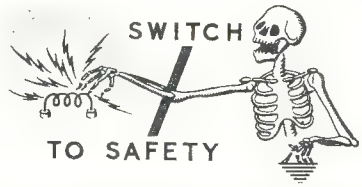
Call	Cer. No.	C'nt-ries	Call	Cer. No.	C'nt-ries
VK5MS	24	330	VK2JZ	61	261
VK3AHO	51	323	VK4HR	12	248
VK6RU	2	313	VK2ADE	65	238
VK5AB	45	312	VK3TL	62	237
VK6MK	43	310	VK2AAK	58	219
VK4FJ	21	292	VK6KW	4	211
Amendments:					
VK2APK	64	201	VK4KS	9	164

C.W.

Call	Cer. No.	C'nt-ries	Call	Cer. No.	C'nt-ries
VK3KB	10	340	VK3NC	19	286
VK3CX	26	313	VK3AHQ	79	281
VK2QL	5	308	VK2EO	2	279
VK4FJ	29	308	VK3ARX	66	270
VK2ADE	81	308	VK6RU	18	265
VK2AGH	71	290	VK3XB	75	257
New Member:					
VK4UC	84	104			
Amendments:					
VK3YL	39	254	VK2APK	76	242
VK3TL	78	233			

OPEN

Call	Cer. No.	C'nt-ries	Call	Cer. No.	C'nt-ries
VK2ADE	28	329	VK2VN	18	290
VK2AGH	83	323	VK3NC	77	287
VK6RU	8	320	VK4HR	7	281
VK4FJ	32	315	VK3JA	43	271
VK6MK	74	309	VK3TL	85	257
VK2ACX	6	300	VK2APK	82	254
Amendment:					
VK4KS	24	198			



TECHNICAL ARTICLES

Readers are requested to submit articles for publication in "A.R.," in particular constructional articles, photographs of stations and gear, together with articles suitable for beginners, are required.

Manuscripts should preferably be typewritten but if handwritten please double space the writing. Drawings will be done by "A.R." staff.

Photographs will be returned if the sender's name and address is shown on the back of each photograph submitted.

Please address all articles to the

EDITOR "A.R.,"
P.O. BOX 36,
EAST MELBOURNE, C.2,
VICTORIA.

REMEMBRANCE DAY CONTEST, 1966

A perpetual trophy is awarded annually for competition between Divisions. It is inscribed with the names of those who made the supreme sacrifice, and so perpetuates their memory throughout Amateur Radio in Australia.

The name of the winning Division each year is also inscribed on the trophy and in addition, the winning Division will receive a suitably inscribed Certificate.

Objects

Amateurs in each Call Area, including Australian Mandated Territories and Australian Antarctica will endeavour to contact Amateurs in other Call Areas. In addition, Amateurs will endeavour to contact any other Amateurs on the authorised bands above 52 Mcs. (i.e., intrastate contacts will be permitted in the v.h.f./u.h.f. bands.)

Contest Date

0800 hrs. G.M.T., Saturday, 13th August, 1966, to 0759 hrs. G.M.T., Sunday, 14th August, 1966.

All Amateur Stations are requested to observe 15 minutes' silence before the commencement of the contest on the Saturday afternoon. An appropriate broadcast will be relayed from all Divisional Stations during this period.

Remembrance Day Contest Trophy

RULES

1. There shall be five sections to the Contest:—
   (a) Transmitting Phone.
   (b) Transmitting C.w.
   (c) Transmitting Open.
   (d) Receiving Open.
   (e) Transmitting Open—v.h.f./u.h.f. only.

2. All Australian Amateurs may enter the Contest whether their stations are fixed, portable or mobile. Members and non-members will be eligible for awards.

3. All authorised Amateur bands may be used and **cross-mode operation is permitted.** Cross-band operation is not permitted.

4. Amateurs may operate on both Phone and C.w. during the Contest, i.e., phone to phone or C.w. to C.w. or Phone to C.w. However only one entry may be submitted for sections (a) to (d) in 1. A separate entry may be submitted for section (e) in 1. An open log will be one in which points are claimed for both phone and C.w. transmissions. Refer to Rule 11 concerning Log entries.

5. For Scoring, only one contact per station per band is allowed. However, a second scoring contact can be made on the same band using the alternate mode. Arranged schedules for contacts on the other bands are prohibited.

6. Multi-operator stations are not permitted. Although log keepers are permitted only the licensed operator is allowed to make contact under his own call sign. Should two or more wish to operate any particular station, each will be considered a contestant and must submit a separate log under his own call sign. Such contestants shall be referred to as "substitute operators" for the purposes of these Rules and their operating procedure must be as follows:—

Phone: Substitute operators will call "CQ RD" or "CQ Remembrance Day" followed by call of the station they are operating, then the word "log" followed by their own call sign, e.g., "CQ Remembrance Day from VK4BBB log VK4BAA."

C.w.: Substitute operators will call "CQ RD de" followed by the group call sign comprising the call of the station they are operating, an oblique stroke and their own call, eg., "CQ RD de VK4BBB/VK4BAA."

Contestants receiving signals from a substitute operator will qualify for points by recording the call sign of the substitute operator only.

7. Entrants must operate within the terms of their licences.

8. Cyphers—Before points may be claimed for a contact, serial numbers must be exchanged and acknowledged. The serial number of five or six figures will be made up of the RS (telephony) or RST (C.w.) reports plus three figures, that will increase in value by one for each successive contact. If any contestant reaches 999 he will start again with 001.

9. Entries must be set out as shown in the example, using ONLY ONE SIDE of the paper and wherever possible standard W.I.A. Log Sheets should be used. Entries must be clearly marked "Remembrance Day Contest 1966" and must be postmarked not later than 5th September, 1966. Address them to "Federal Contest Manager, W.I.A., G.P.O. Box N1002, Perth, W. Aust.," Late entries will be disqualified.

10. Scoring will be based on the table shown. A bonus of 25 points may be claimed for the first contact with other call areas on each of the bands 52 Mcs. and above.

SCORING TABLE

From \ To	VK0	VK1-2	VK3	VK4	VK5-8	VK6	VK7	VK9
VK0 ..	–	6	6	6	6	6	6	6
VK1-2	6	–	1	2	3	5	4	6
VK3 ..	6	1	–	3	2	5	4	6
VK4 ..	6	1	2	–	3	6	5	4
VK5-8	6	2	1	3	–	5	4	6
VK6 ..	6	1	2	4	3	–	5	6
VK7 ..	6	2	1	4	3	5	–	6
VK9	6	1	2	3	4	5	6	–

Note.—Read table from left to right for points for the various call areas.

In addition, all intrastate contacts on bands 52 Mcs. and above are worth 1 point each.

Portable Operation: Log scores of operators working outside their own Call Area will be credited to that Call Area in which operation takes place.

EXAMPLE OF TRANSMITTING LOG

Date/ Time G.M.T.	Band	Emission and Power	Call Sign Worked	RST No. Sent	RST No. Revd.	V.h.f. Bonus	Points Claim.

Note.—Standard W.I.A. Log Sheets may be used to follow above form.

EXAMPLE OF RECEIVING LOG (VICTORIAN S.W.L.)

Date/ Time G.M.T.	Band	Emission	Call Sign Heard	RST No. Sent	RST No. Revd.	Station Called	V.h.f. Bonus	Points Claim
Aug. '66								
13 0810	7 Mc.	A3 (a)	VK5PS	58002	——	VK6RU	—	2
13 0812	,,	,,	VK6RU	59007	——	VK7EJ	—	5
13 1035	52 ,,	A3	VK4ZAZ	56010	——	VK5ZDR	25	28
13 1040	,,	,,	VK3ALZ	59025	——	VK3QV	—	1

Note.—Standard W.I.A. Log Sheets may be used to follow the above form.

e.g. VK5ZP/2. His score counts towards N.S.W. total points score.

11. All logs shall be set as in the example shown and in addition will carry a **front sheet** showing the following information:—

Name . . . . . Section . . . .

Address .....Call Sign .....

... .Claimed Score . ... .

No. of Contacts . . . .

Declaration: I hereby certify that I have operated in accordance with the Rules and spirit of the Contest.

Signed . ...

Date . . ..

All contacts made during the Contest must be shown in the log submitted (see Rule 4). If an invalid contact is made it must be shown but no score claimed.

Entrants in the Open Sections must show C.w. and Phone contacts in numerical sequence.

12. The Federal Contest Manager has the right to disqualify any entrant who, during the Contest, has not observed the regulations or who has consistently departed from the accepted code of operating ethics. The Federal Contest Manager also has the right to disallow any illegible, incomplete or incorrectly set-out logs.

13. The ruling of the Federal Contest Manager of the W.I.A. is final and no disputes will be discussed.

Awards

Certificates will be awarded to the top scoring stations in sections (a) to (c) of Rule 1 above in each call area. VK1 and VK8 will count as separate areas for awards. There will be no outright winner for Australia. Further Certificates may be awarded at the discretion of the Federal Contest manager.

The Division to which the Trophy will be awarded shall be determined in the following way.

To the average of the top six logs shall be added a bonus arrived at by adding to this average the ratio of logs entered to the number of State Licensees (excluding Limited Licensees) multiplied by the total points from all entries in sections (a), (b) and (c) of Rule 1.

$$\text{Average of the top six logs} + \left[\frac{\text{Logs Entered}}{\text{State Licencees exclud. Z Calls}} \times \frac{\text{Total of Points from all Entrants}}{\text{Sect. (a) (b) (c)}}\right]$$

VK1 scores will not be included with VK2 nor VK8 with VK5.

Acceptable logs for all sections shall show at least five valid contacts.

The trophy shall be forwarded to the winning Division in its container and will be held by that Division for the specified period.

RECEIVING SECTION
(Section D)

1. This section is open to all Short Wave Listeners in Australia, but no active transmitting station may enter.

2. Contest times and loggings of stations on each band are as for transmitting.

3. All logs shall be set out as shown in the example. The scoring table to be used is the same as that used for transmitting entrants and points must be claimed on the basis of the State in which the receiving station is located. A sample is given to clarify the position.

It is not sufficient to log a station calling CQ—the number he passes in a contact must be logged.

It is not permissible to log a station in the same call area as the receiving station on the m.f. and h.f. bands 1.8-30 Mcs., but on bands 52 Mcs. and above such stations may be logged, once only per band, for one point. See example given. VK1/VK2 and VK5/VK8 are considered to be the same area for scoring purposes.

4. A station heard may be logged once on phone and once on C.w. for each band.

5. Club receiving stations may enter for the Receiving Section of the Contest, but will not be eligible for the single operator award. However, if sufficient entries are received a special award may be given to the top receiving station in Australia. All operators must sign the Declaration.

Awards

Certificates will be awarded to the highest scorers in each call area. Further Certificates may be awarded at the discretion of the Federal Contest Manager.

TRANSMITTING OPEN — VHF/UHF ONLY SECTION (SECTION E)

Additional Notes

1. This section was introduced in answer to the request by many Amateurs that provision be made for participation by Limited Licensees and other VHF/UHF operators. It is in the nature of an experiment and because of this, logs entered for section (e) at this juncture, will not be considered in the determination for the Trophy winner. In the light of future experience, response to this section by those it is intended to interest, and comments from all interested parties, other additions and changes may be made.

2. All intrastate contacts in the bands above 52 Mcs. will count for one point. Interstate contacts will be valued as in the table for MF/HF contacts including the bonus 25 points for the first contact with each new call area.

3. Entrants may submit logs for one Transmitting Section other than (e) and interstate VHF/UHF contacts may be included in both logs.

4. Logs must be set out in the standard manner prescribed.

Awards

Certificates will be awarded to the highest scorer in each call area.

Note I.—The Federal Contest Manager emphasises the need for strict observance of Rule 9 in the Transmitting Section and Rule 3 in the Receiving Section.

Note II.—Note that the use of G.M.T. is required in accordance with Institute Policy to encourage the use of G.M.T. by Australian Amateurs.

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Total	$

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☆

CENTRAL QUEENSLAND BRANCH DISPLAY

The display, set up by the Central Queensland Branch, in a Rockhampton shop window consisted of items of radio equipment ranging from a replica of the first radio valve ever produced to the latest communications equipment. Trophies, Certificates and awards won by local members were also displayed.

(Block by courtesy of Rockhampton "Morning Bulletin.")

☆

BOEING DEMONSTRATES METEOR-BURST COMMUNICATION

Oceanographic Data Relayed with Help of Meteor Trails

A transmission system which hitches a ride from falling stars has been successfully demonstrated by The Boeing Co., Seattle, Wash., from the location of an underwater mountain in the Pacific Ocean. Known as meteor-burst communication, the system transmits data by bouncing radio signals off trails left by meteors entering the earth's atmosphere. It was designed by the Boeing anti-submarine warfare systems organisation as a communications link for an oceanographic research programme conducted by the University of Washington.

In tests from Cobb Seamount, located 315 miles west of Grays Harbour, Wash., and 440 miles from Seattle, meteor-burst signals were received at Inglewood Research Site, near Issaquah, Wash., a total line-of-sight distance of 450 miles. System range is approximately 1,000 miles, according to Paul Pflueger, Boeing Aero-Space Division A.S.W. Systems Manager.

Millions of meteorites enter the earth's atmosphere daily, burning up quickly through air friction. As this occurs, an ionised trail is left which dissipates rapidly and eventually is absorbed in the ionosphere. The meteor's trail above the ionosphere is the basis for the communications system developed by Boeing. Use of meteor trails to transmit data offers the advantages of greater stability and control of the radio signal, according to Pflueger. Unlike the ionosphere, which is used for conventional radio transmission, meteor trails are affected little by sun spots or other interference which can cause signal fadeout and static. A signal bounced off of a meteor trail continues along a more direct path than a signal reflected from the ionosphere. Most meteor trails exist only for fractions of a second over an extremely small area and this trail does not offer a multiplicity of reflected pathways as does the ionosphere. Another major advantage is that the equipment operates at low power and on v.h.f., thus avoiding the crowded h.f. bands.

The Boeing-designed system has a land-based, master control station. In operation, the station sends a probe signal skyward, seeking a meteor trail at the proper angle to reflect the signal downward to the ocean-based "slave" station. The reflected probe activates ocean surface and sub-surface measurement instruments which then transmit stored-up data using the same meteor trail as the probe signal. Boeing engineers have found that a frequency of 50 Mcs. provides the best equipment performance.

From "Frequency," July/Aug. 1965.

STANDARD STATIONS RECEIVED IN FAR EAST.

Frequency	Call	Emission
9,990.0	RTA	1-sec. and 0.1 sec. pulses.
10,000.0	RES/RMW Moscow	Carrier, 1-sec. time ticks; alternates carrier only.
10,004.0	RID	Carrier, 1-sec. and 0.1-sec. pulses; alternates no carrier, 1-sec. pulses with longer pulse on minute.
14,992.0	(RES/RWM)	1-sec. and 0.1-sec. pulses.
15,000.0	RES/RWM	Carrier, 1-sec. time ticks; alternates carrier only.
15,010.0	(RES/RWM)	1-sec. pulses.
20,000.0	BPV Tientsin, China	Carrier and 1-sec. ticks.
20,008.0	RID	Carrier, 1-sec. and 0.1-sec. pulses; alternates no carrier, 1-sec. pulses with longer pulse on minute.
21,800.0	(RID)	1-sec. and 0.1 sec. pulses.

From "Frequency," July/August, 1965.

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Performance Data	PC1	PC2	PC3	PC4	PC5	PC7	PC9
Power Output mW. ..	150	400	400	400	3W	800	Pre-Amp.
Input Impedance ohms	1.5K	1K	2.5K	220K	1.5K	1.5K	1M
Output Impedance—ohms	40	15	15	15	3	8	600
Supply Voltage—volts	9	9	9	9	12	9	9
Typical distortion %	2	3	3	3	3	3	1
Frequency response	300-15K	200-12K	200-12K	200-12K	50-12K	50-12K	20-20K
Overall Dimensions .... All ¾ in. high	2x1	2½x1½	2½x1½	2½x1½	5½x1¾	3x1¾	2x1
PRICE	**$5**	**$6.27**	**$6.27**	**$6.27**	**$12.47**	**$7.53**	**$4.50**

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PC4—G.P. Amp. and Driver's Office Dictating Machines. Listening Booth Amps.

PC5—Portable Audio Amps. Car Radio Audio Amps. Servo Amplifier. Tape Relay Amp. Automation Drive Amp. Burglar Alarm Amp.

PC7—Tape Language Lab. Telephone Dictating Machine Amps. Control Amp. for Textile Machinery.

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1N3194	—750 mA. @ 400 P.I.V.	**55c**	„ „ „
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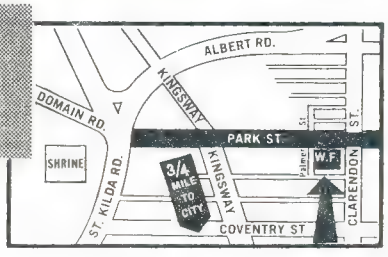

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W.I.A. Federal President's Annual Report

Gentlemen! It gives me considerable pleasure to present this report to the Federal Council on the occasion of the 30th Federal Convention of the Wireless Institute of Australia.

In this report, covering the period from April, 1965, to March, 1966, I am confident I shall convey to you a comprehensive survey of your Executive's activities and to generally summarise the national and international scene pointing out, as I proceed, some of the major obstacles the Amateur Service is likely to meet in the years ahead.

1965 Convention. Some of you will recall from last year's Convention that Mr. Harold Hepburn took office as Vice-President and Mr. Kevin Connolly as Treasurer, joining forces with Peter Williams (Secretary), Alfred Seedsman (Business Manager), Bill Mitchell (Communications Manager), David Rankin (Federal Activities and Contest Liaison Officer), and myself as Chairman and President.

I would first like to pay a tribute to the exemplary team spirit which prevailed from the commencement of the year's work. Following justifiable criticism on the protraction of time in producing the official minutes from the previous two conventions, the team went to work with concerted energy and with the assistance of clear tape recordings of the proceedings were able to forward copies of the minutes within weeks of the conclusion of the Convention. This same co-operation and drive has been evident throughout the year resulting in "getting things done" within the limitations imposed on people who give of their spare time in an honorary capacity. In return the Divisions did not delay in ratifying the minutes and matters arising from the minutes have been attended to.

One of the largest projects undertaken by the Executive of the Federal Council of the W.I.A. in many years has been the almost completed re-write of the Handbook for Operators of Radio Stations in the Amateur Service.

The Federal Council is aware that such an undertaking was not on the Executive's work schedule for this year. The task was in effect self imposed because the Executive was most unhappy with proposals received from the Central Office of the Postmaster-General's Department by which certain amendments, additions and deletions were to be made to the Handbook for Operators of Radio Stations in the Amateur Service. The Executive's representations lodged at the highest necessary level resulted in the full co-operation of the Department to re-write the Handbook.

It is not my intention to bore you with the mechanics by which this was accomplished, but suffice it to say that we co-opted the services of Michael Owen VK3ZEO, who with assistance in the main from Harold Hepburn, Peter Williams and Kevin Connolly, expended scores of hours in a concentrated effort on the work involved.

I was able to attend a number of the meetings my self and cannot speak too highly of the intelligent and intellectual manner in which the vast problem of this re-write was undertaken. The project was systemised from the commencement and when drafts were finally exchanged between the Department and the W.I.A. at an all-day conference an almost complete unanimity of thinking was evident leaving a mere handful of problems at which both parties agreed to have another look. As at the time of writing this report a further meeting has been completed resulting in the resolution of all but one or two of the remaining problems, one of which is s.s.b. power measurement and I am confident this will be resolved to our satisfaction in the near future.

It is true to say that we have not achieved every advantage we would have liked in this re-write. There has been the necessity to give a little as well as take but the nett result will be a Handbook devoid of many of the ambiguities and unrealistic restrictions which have "bugged" the Amateur Service for many years.

The most notable outcome of this project in my mind is the common-sense and liberal thinking which has prevailed. It has required a great deal of tact and diplomacy to bring about some of the changes with mutual agreement and I believe it sets an example to our own internal organisation. If by mutual trust and understanding of each other's problems a project such as this can be so satisfactorily completed between a Government Department and this Institute, then I feel strongly that this same mutual trust and understanding should prevail in our own deliberations on the major matter of Federation. If each of two or more parties stick rigidly to some point of view and are not prepared to give and take with trust and understanding then I believe that the final solution to a problem can never prevail.

In concluding this section of my report I would like to record my personal thanks to Michael Owen in particular, and to the other members who so ably assisted in the re-write of this Handbook. Not only have we achieved more flexible operating rules for the Australian Amateur, but we have achieved a personal liaison with our own Administration which has never been bettered.

As I have mentioned Federation of the Institute I would like to also record at this stage my personal thanks to Michael Owen and John Battrick who, under co-option by the Executive, gave up a week-end of their time during the year to fly to Sydney. The trip was made to personally explain certain details of the proposed Federal Constitution which were in conflict with the N.S.W. Division. I believe some degree of success was achieved and I am hopeful that the remaining problems will be resolved during the course of this Convention.

As far back as I can remember there have been instances of direct action by Divisions and/or individual Amateurs to obtain approval from the Department to engage in some activity which currently is not covered by the general regulations under which the Amateur Service operates, or to bring about some change in existing conditions due to exigencies of one kind or another. Such direct action has generally resulted in a refusal and by the time the matter has reached Executive level a deal of damage in relationships has resulted and your Executive has at times been placed in an embarrassing position.

During the year several matters were attended to by the Executive at Central Office level which could have saved a deal of wasted effort and frustration had they been represented to the Executive in the first place. I mention in passing the permission to operate unattended v.h.f. beacon stations, a specific permission to a VK5 Amateur to use 1 kw. power for the purposes of moonbounce experiments and permission for Amateurs within the precincts and boundaries of Woomera to use other than the Woomera Radio Club station.

Whilst I agree that Federal Councillors can hardly be held responsible for direct action by an individual Amateur, I do lay the blame on the Federal Councillor if he permits his Division to make representations directly on matters of this nature.

I would therefore again stress most strongly that this type of problem be directed to your Executive. That is one of the major reasons for its existence, to speak for the Amateur Service at the proper level. Too often the local Administrations are unaware of agreements reached at Central Office level and, in any case, consider they have no power to make a decision in the applicants' favour so they say . . . No.

The Youth Radio Scheme has continued to progress to the point where it may be considered too large to handle under the existing conditions. It appears to me to lack necessary Federal co-ordination.

However, the scheme is doing an immense amount of good with young people and many students have passed and received the various certificates throughout the year. I had the privilege of presenting trophies to two of the first blind candidates to pass the elementary examination at the Victorian Institute for the Blind School at Burwood and to successful candidates at the Gowrie Park State School.

I believe the Y.R.S. to be one of the most powerful influences in which the Institute should participate fully. It is not only doing humanitarian service in interesting young people in a hobby but it is also serving a most useful purpose in a section of the normal educational system.

October, 1965, saw yet another more-popular-than-ever Scout "Jamboree-on-the-Air," this year dedicated to the United Nations International Co-operation Year to celebrate which the Postmaster-General's Department issued a 2/3d. commemorative stamp.

Many more stations participated in this event than ever before, indicating not only the interest scouts are taking in Amateur Radio but also the interest Amateurs are taking in fostering scout activity in our field of communications. This has rapidly become a "sure fire" annual event and I record here the thanks of the Institute as a whole to all those Amateurs who opened their shack doors during the week-end of October 16 and 17, welcoming groups of scouts and encouraging their interest.

I am pleased to report a great improvement in the conduct of contests over the past year under the control of the Federal Contests Manager, Neil Penfold. The VK6 Division are to be complimented for providing an active Federal Contest Committee on behalf of the Federal Council and I record my personal thanks to the members of the committee for a job well done, and also to David Rankin from the Executive who acted as liaison between the Committee and the Executive which resulted in particularly smooth operation of an Institute activity which can only be classified as a difficult and time consuming one.

You will find a downward trend in contest participation. Operation in contests is a valuable training ground for Amateurs who might at some time be called upon to serve in the communications branches of the Australian Defence Forces. This facet of training is one of the claims most radio societies uphold as a strong reason for maintaining an Amateur Service together with other activities such as civil defence.

If we are losing participants I believe we should take a look at the situation to find out why. Are we tired of contests? Are there too many contests? Are our contest rules too complicated? Is our publicity not good enough? Or is it that we just can't be bothered?

Whatever the reason I believe corrective measures should be taken to increase activity for not only is it a training ground for operational purposes but it provides band occupancy, a matter which concerns all countries in which Amateur Radio flourishes because it assist materially in the preservation of our frequency allocations.

As there were no major disasters during the past year the Wireless Institute Civil Emergency Network organisation did not have a spectacular year. The VK3 network was used to a limted degree during the fire period early this year. The network did, however, operate a simulated emergency in conjunction with the Red Cross and otherwise conducted practice operations.

Emergency network organisation is one of the most valuable opportunities the Amateur Service has of demonstrating its worth in the public service, and I therefore cannot stress enough the importance of maintaining these networks ready for immediate action when called upon for assistance, whenever and wherever an emergency may eventuate.

The Federal QSL Bureau Officer, Ray Jones, and the Federal Awards Officer, Alf Kissick, have contributed of their time in their usual efficient manner. Reports from these two officers will be read later in the proceedings.

The Federal Historical Records Officer has also provided a short report and it is encouraging to know that some 150 foolscap pages have now been compiled. However, I believe there must be a lot of old material which could be made available to the Executive to assist in filling in the spaces, and I would ask Federal Councillors to keep the historical records in mind when moving among the members of their Division. Any valuable documents will be returned to the sender if so desired.

You will recall from the December, 1964, Executive Minutes that an offer from the A.R.R.L. headquarters had been extended to all member societies of the I.A.R.U. to handle individual subscriptions to the Magazine "QST" previously handled through commercial agencies.

After obtaining clarification of certain aspects of the proposal the position clearly indicated that either the W.I.A. undertook the work involved or it nominated an agency. After careful consideration the Executive was unanimous in its decision to take up the offer and Mr. Alf Seedsman agreed to accept responsibility of the undertaking. From the Treasurer's report and balance sheet you will note a small profit accrued by way of commission on each subscription. This was made available by the A.R.R.L. to offset operating costs in addition to a reduced cost of the publication to the subscriber.

At the time of writing this report some 400 subscriptions have been handled and this figure is increasing each month. I would like to record my thanks to Mr. Seedsman for the time and effort he has given to the project, and suggest to the Federal Council that the Divisional Councils encourage members to place their subscriptions with the W.I.A. to obtain the benefit of the lower subscription rate available to them.

The most vital matter in any club, society or institution is its membership. This is the lifeblood of the organisation without which it cannot function. Although not spectacular, I am pleased to report that according to the figures available there has been a modest increase in membership in all Divisions with the exception of VK4 which showed a drop of 34 members over the period February, 1965, to February, 1966. The following are the membership figures (which include all grades of membership) and are compared with the total

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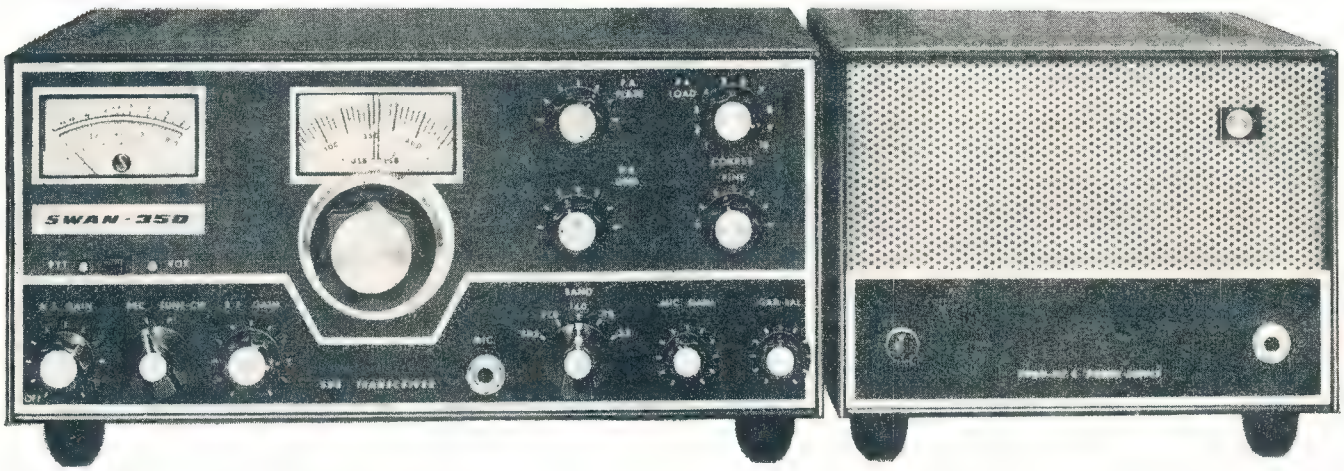

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Swan VX1 5 Transistor VOX Unit	£25	0	0	$50.00
Swan SW22 VFO Adaptor Unit (split channel)	£20	0	0	$40.00
Swan SW260C de luxe 240v. a.c. Power Supply w/- speaker, in matching cabinet	£40	0	0	$80.00
240v. a.c. Basic Power Supply, without cabinet	£35	0	0	$70.00
Swan SS2 Opposite Sideband Kit (genuine)	£17	0	0	$34.00
Swan 100 Kc Xtal Calibrator (genuine)	£17	0	0	$34.00
Swan WFS500 12v. d.c. 500 watt Power Supply	£65	18	0	$131.80
Opposite Sideband Kit (Aust.)	£3	15	0	$7.50
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licensee listings taken from the 1966 issue of the Australian Radio Amateur Call Book. The comparison is listed for the period 1964 to 1966.

	1964		1965		1966	
	M	L	M	L	M	L
N.S.W.	1172	1485	1228	1564	1277	1679
Victoria ...	728	1421	858	1487	955	1535
Queensland	423	501	511	540	477	640
S. Australia ...	547	585	514	623	541	680
W. Australia .	216	324	246	339	277	367
Tasmania	184	154	208	170	213	181
Total	3270	4602	3565	4869	3740	5082

The licensee (L) tabulation above couples VK1 with VK2, VK0 with VK3, VK9 with VK4 and VK8 with VK5.

Of the total of 5082 licenses now issued in the Commonwealth it is interesting to record the comparison between full and limited licence holders:—

	Full	Limited	Total
New South Wales	1331	348	1679
Victoria	1106	429	1535
Queensland	495	144	640
South Australia	488	192	680
Western Australia	260	107	367
Tasmania	127	54	181
Total	3808	1274	5082

From the above figures it will be noted that the limited licensees comprise near enough to 25% of the total licences issued. I believe this state of affairs is something which should be the direct concern of the Federal Council of this Institute. If the decline of applicants taking the morse code test for the "full ticket" proceeds at its present rate I can only see grave danger ahead for the future retention of the bands between 3.5 and 30 Mcs.

The draft of a publication the Executive is proposing to have printed for general circulation is the subject of an agenda item later on in the Convention proceedings. This pamphlet is designed to interest people in taking up the hobby of Amateur Radio and may have little effect on the ratio of limited to full licensees. I believe, therefore, that the Divisional Councils should vigorously campaign to encourage the holders of Z calls to take the morse code test.

From the previous figures there is a noticeably lower percentage of members enrolled in the two larger divisions compared with the licensees for those states. I am aware that the larger divisions have more difficulty in enrolling licensees than do the smaller divisions but I can only reiterate what previous presidents have said . . . "that a sound progressive programme of recruitment is a constant necessity if our ultimate aim to represent every Amateur in Australia is to be achieved.

I would like to record here my personal thanks to Major Bill Mitchell VK3UM, for the statistical membership records he has maintained for many years and from which the aforementioned figures were extracted.

The financial position of the Executive is considered to be quite satisfactory although a lower surplus is evident in the Income and Expenditure Account for the year ending February, 1966, compared with the previous year.

This lower surplus has been caused by an increase in general and incidental operating costs. Such increases are inevitable if the Executive is to carry out its duties efficiently within the capacity of its officers' available spare time. Over the last twelve months, for example, it has been necessary to pay for outside typing services for the submissions to the P.M.G. in relation to the re-write of the Handbook; the Federal Contest Committee and Youth Radio Scheme have cost more in order to operate more efficiently; costs of co-ordinating these two functions under the Federal Activities Officer has brought about a quite substantial increase: and overall a sharp increase in postages has been inevitable.

Operating costs are financed from per capita funds and in general this has been the source for payment of the increases with part subsidy from Executive's publication trading activities.

Because of accrued profits from other sources than per capita it is not proposed at this stage to request any further increase in per capita payments from Divisions. Nevertheless, the Federal Council must realise that if it is going to direct its Executive to undertake increased productive activity, and this has been evident as the Institute has grown, then it must provide the finance.

The future of the Amateur Service all over the world is far from being as secure as individuals might think and I shall mention this further towards the conclusion of this report. At this stage it is pertinent to remark that the Institute will require far greater funds in the future than it currently holds if it is to successfully represent the Amateur Service in the Australian section of Region III.

For this reason I believe that the funds the Executive has accrued by its trading activities should not be spent on increased costs of administration of an "office nature" but used for major future projects such as Region III conference of I.A.R.U. Societies, attendances at possible Regional Conferences of the I.T.U. and other activities of this nature.

The statistics kept by the Executive show that the licensee figure has doubled itself over the period from 1943 to 1965. For the past 12 years it has increased at a steady rate of approximately 200 per year. On this basis we can reasonably forecast a total of 7000 licensees by 1975. A novice licence could cause a steeper gradient on the graph as did the introduction of the limited licence in 1954. Whatever happens, the Executive, however it be constituted, will require much larger funds than are available today.

I record my thanks to Kevin Connolly for a job well done as Treasurer, particularly as he is not an accountant. The books are in excellent order and steps have been taken for certain changes designed to simplify our previous system at audit time which is the busiest time of the year for the Treasurer.

At this Convention each Federal Councillor will receive copies of "The Geneva Story." This has been protracted project but has taken toll of unaccountable hours in its compilation from a huge pile of Geneva documents sent back by the late John Moyle in 1959.

There has been no immediate use for the documentation but it will now serve as a useful guide to future W.I.A. representatives attending conferences dealing with regulations and frequency assignments, and as a valuable reference in the Institute libraries. Where Divisions do not own their own premises I would ask the Federal Councillors to retain these in their possession, making sure they are passed on to incoming officers to be held as Federal property. Major Bill Mitchell is to be complimented on completing an extremly arduous project without assistance.

Following on the 1965 Convention a subcommittee was formed, comprising Michael Owen, Bill Mitchell and myself to investigate fully the workings of the American F.C.C. organisation in relation to the system used in Australia by the Postmaster-General's Department.

Copies of relevant documents were obtained from the U.S.A. and one meeting was held to formulate a working basis. I have to report that this activity had to be "shelved" for the time being because the re-write of the Handbook, of necessity, took precedence. This programme will be taken up again later on.

Activity by Amateurs on all bands appeared to have shown an upward trend other than in contest participation. This is probably due to gradual improvement in the sunspot cycle conditions which are reported to be climbing out of the "trough." As history-making events take place in the v.h.f. spectrum I shall confine myself to reporting a few of the records achieved over the past year.

There have been an increasing number of 144 Mc. contacts across the Tasman Sea, Sydney stations in particular finding ZL contacts to be now somewhat routine. However, the first recorded contacts have been made between VK3 (Melbourne) and ZL2 and between VK5 areas during December, 1965. Final details are not yet available.

The v.h.f. distance record on 432 Mcs. was broken during the year, contact being recorded and confirmed between VK3ZDM near Ballarat and VK7LZ in Launceston, a distance of 312 miles.

The first 1296 Mc. working was recorded during January between VK3OB/3 and VK3AUX/3 over an approximate distance of 3 miles.

This year witnessed the completion of two certificates for Short-wave Listeners and I refer to the SWL DXCC Award and the Heard All VK Call Areas (HAVKCA) Award. After hearing so many complaints aired by s.w.l.'s at the delay in producing these awards it is somewhat disheartening to find that to date only two applications have been made for the DXCC and none for the HAVKCA. Perhaps Federal Councillors could instruct Councils to give this matter some publicity in local bulletins. I record my thanks to Eric Trebilcock for looking after this aspect of Institute activities.

No report would be complete from this Executive without particularly mentioning the work carried out by the Federal Secretary. Peter Williams has done an admirable job this year and I am sure that Federal Council will agree with me when I say that it would be some years since it has been so promptly and advisedly appraised of what was going on within the Executive administration.

The Institute is growing too large to operate much longer at Federal level with time donated by Executive Members from available leisure hours, in particular the secretary. If the Federal Council expects its Executive in this day and age to undertake the urgent projects of the future, and I have referred to some of these previously, then I believe it must accept with some concern the responsibility of finding the wherewithal to have its Executive function in accordance with current requirements.

The Publications Committee continued its usual efficient team work in publishing "Amateur Radio," which changed to a more modern format during the year. It was interesting to note that the magazine received credit in an R.S.G.B. publication which reprinted a couple of original VK circuit developments with technical description.

I would like to record my appreciation of the immense amount of work carried out in the continued high quality of the Institute's magazine. The scribes and subscribers of articles are also to be commended for their honorary work.

The Postmaster-General's Department has expressed its concern at the high failure rate of applicants sitting for Departmental examinations. This failure rate includes applicants for Amateur certificates.

This appears to me to somewhat downgrade the Institute training courses, if indeed it is Institute-trained applicants who are failing, and I suggest the Divisions look into the matter on return to their home states.

You will find in the near future that the Department intends to hold examinations twice yearly by which means they consider applicants will have additional time in which to study and the failure rate should therefore decrease.

After several requests, the Executive has now been supplied with a copy of the "Proposed Australian Table of Frequency Allocations"—10 Kcs. to 40 Kcs.—prepared by Sir Leonard Huxley's Radio Frequency Allocation (Space Service) Committee.

During the year arrangements were completed between the Postmaster-General's Department and the Department of External Affairs for reciprocal licensing conditions for Australian and U.S.A. Amateurs. Similar conditions exist between Australia and the United Kingdom.

We are indebted to the Hon. Alan Fairhall, M.H.R., now Minister for Defence, for expediting the Australian-American agreement.

In reply to the Executive's request for Divisional Councils' nominations for the position of W.I.A. I.T.U. Representative three people have now offered their services and each will be given consideration. At the time of writing this report no decision has been made. The Executive anticipates the completion of its decision early after Easter.

In concluding this report I would like to mention briefly some aspects of the international scene.

As far back as 1959 I mentioned in reports published in "Amateur Radio" and in tape recordings played over Divisional stations some details of the commercial pressures for frequency space which would beset the Amateur Service world wide. I noted at that time from reading overseas journals I was the only member of an Amateur society (and I was speaking on behalf of the W.I.A.) who appeared to express concern about this particular matter.

Today I find it to be the focal point contained within a powerful circular sent out to Amateur Societies by the President of the I.A.R.U., Herbert Hoover, Jnr., W6ZH.

He says, "If the next frequency allocations conference fails to continue present assignments for Amateurs in the international allocation table, the national administrations will be obliged to reduce Amateur frequency bands to conform." Unquote.

There are now 129 governments which take part in the proceedings of frequency allocation conferences and each one has an equal vote. Currently there are only 64 I.A.R.U. societies which means that the I.A.R.U. represents only one-half of the countries who cast a vote in the I.T.U.

Mr. Hoover goes on to say therefore that the solution of the problems facing the Amateur Service . . . "Will require close co-operation between Amateur Societies on a worldwide basis, and success will tax our ingenuity and resourcefulness to the utmost."

It is obvious to those who care to keep in contact with I.T.U. matters that the international scene is rapidly changing. The I.T.U. is undergoing reorganisational changes as a result of its Plenipotentiary Conference held in Montreaux during September, 1965. The date of the next Radio Conference is unknown although the next Plenipotentiary Conference is due to be held in Geneva in 1971. It is highly probable that there will never be another conference as there was in Geneva in 1959 dealing with the entire frequency spectrum; more likely there will be smaller Regional Conferences dealing specifically with problems related to sections of the frequency spectrum. The Radio Allocations (Space Services) Conference in 1963 was an example of this.

(Continued on Page 21)

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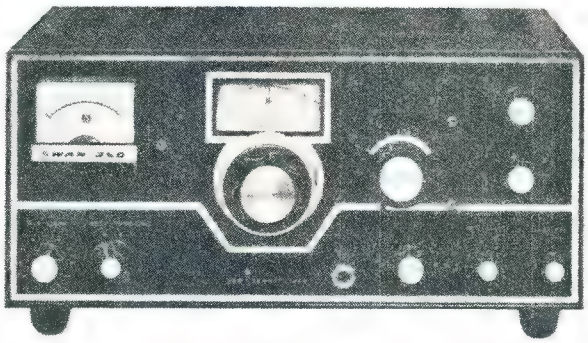

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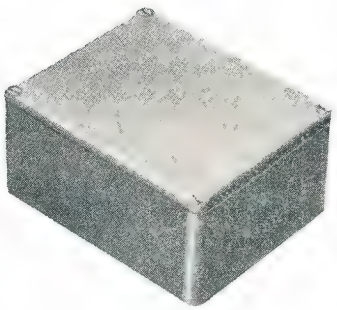

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YRC

All the indications are that VK2 and VK3 are on their way to new records in numbers of clubs. VK3 finished 1965 with 30 clubs while VK2 had 45, so 1966 should be an interesting competition. This year Ken Matchett has had to retire for personal reasons from the position of VK3 Supervisor. He guided the scheme for its first three years in VK3 and can look back with pleasure on the growth from five to 30 clubs. For the present, all Y.R.S. correspondence should be addressed to that other tireless worker, Dave Buck, 263 Gooch Street, Thornbury, Vic. With latest batches from Macleod, Geelong East, Essendon Grammar, Australian Air League Squadron, and a non-club (Peter Cole), of N. Balwyn, the total Elementaries is now at 137 in VK3. The same Peter Cole has made the big step forward and passed full A.O.C.P. Unfortunately, I have no personal details, but congratulations are certainly due. Here's a new thought for VK3—what about some Y.R.S. Operators' awards? There are a number of contacts made (under supervision) by members of clubs and the Radio Telephony Operator's Certificate or the Radio Telegraphy Operator's Certificate would make a nice addition to certificates already gained and would systematise the use of club stations. What about an effort on this?

VK2 could also make a stronger effort on these Operator's Certificates. There are plenty of Transmitting Clubs and it is certainly part of the Y.R.S. to train possible operators (provided they have practised to reach a minimum standard beforehand) in the correct procedures, especially in consideration for others. Some firms and individuals continue to join the ranks of donors—a healthy sign that a good work is being recognised. Commonwealth Electronics, General Accessories, O.T.C. (regularly), Fairchild, Milton 2LI, and Pye are recent additions. Donations, small or large, will be really a subsidy for schools or other groups. Club leaders will retain valuable items for Y.R.S. purposes by keeping some type of register of Y.R.S. property. The director of O.T.C. presented a book prize to Greg. Dunne at Kingsgrove High for being the first to gain Senior Certificate. John Thyrd, formerly of Kingsgrove North High, hopes to have Clemton Park Boys' Brigade on the air in the near future (the second Boys' Brigade transmitting station). Bro. D. L. Kinsella (Waverley College) has agreed to take over the job of Publications Officer for VK2 Y.R.S., and all correspondence in regard to forms and publications should be sent to him and not to hard-pressed Supervisor Rex. Another full A.O.C.P. goes to a Y.R.S. type Bruce North, of Kiama High. Congratulations are due for another fine achievement and a parcel of parts from Rex's "garage" (when was the car last inside, Rex?) goes to Bruce.

A most interesting club is the new one at Mittagong Training School for Boys, conducted by the Resident Psychologist, Mr. S. Hasleton, with the idea that an absorbing hobby could help these boys adjust. Could other clubs help with parts, duplicated sheets of instructions, kits, etc.? Mr. Jack Standard, of Epping Boys' High has a Tx on issue from Y.R.S. and the school should be on the air soon. A special appeal is addressed to club leaders or secretaries to send news to (a) me! (Selfish!); (b) Newsletter Editor Jim Webster at Birrong High and/or Rex 2YA—it would be good training for the boys. The VK2 Division officials still support Y.R.S. in many ways such as the presentation of prizes to Greg. Dunne and Ernie Chalker (first P.G. member to get L.A.O.C.P.). Y.R.S. strongly supports the Division with 30 new members from its ranks in four years.

We are proud of a group here at Canberra Radio Society. Six sat for Elementary and all six obtained Honours with over 90%. One has pressed on hard and we are watching for an A.O.C.P. result. New clubs are developing at Canberra High (re-formed) and Deakin High, while Lyneham, Narrabundah and Canberra Radio Society continue. 73, Ken 1KM.

CONTEST CALENDAR 1966

4th/5th JUNE—CHC/FHC/HTH QSO Party.
2nd/4th JULY—Venezuelan Independance Contest (Phone only).
9th/10th JULY—R.S.G.B. 1.8 Mcs. "Summer" Contest.
13th/14th AUGUST Remembrance Day Contest.
10th/11th SEPTEMBER—WAE Contest (Phone Section).
1st/2nd OCTOBER—VK-ZL-Oceania DX contest (Phone Section).
8th/9th OCTOBER—VK-ZL-Oceania DX Contest (C.w. Section).
15th/16th OCTOBER—R.S.G.B. 21/28 Mcs. Telephony Contest. (Note the date for this contest has been changed from that originally advertised.)

FCC Form 660-A
February 1965

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FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

PERMIT FOR ALIEN AMATEUR RADIO LICENSEE TO OPERATE IN THE UNITED STATES, Its Possessions and the Commonwealth of Puerto Rico

JAMES RUSSELL GODING
51 BAY VIEW DRIVE
SHREWSBURY, MASS. 01546

Effective date of this Permit: JANUARY 12, 1966

This Permit Expires: SEPTEMBER 2, 1966

The above-named alien is hereby authorized to operate the following described amateur radio station in the United States, its possessions, and the Commonwealth of Puerto Rico:

License or Serial Number	Licensing Country	Call Sign	Expiration date
13429	AUSTRALIA	V K 3 Z G G	SEP 2, 1966

Operation under this permit must be in accordance with (1) Current International radio regulations; (2) the terms and conditions of the bilateral agreement for reciprocal amateur radio operation between the alien's Government and the Government of the United States; (3) Subparts A through E and G of Part 97 (Amateur Radio Service) of the Rules of the Federal Communications Commission; (4) the terms and conditions of the license issued to the alien by his government; and (5) the special conditions (if any) set forth below.

This permit may be summarily modified, suspended or cancelled by the Commission without advance notice.

SPECIAL CONDITIONS: OPERATION LIMITED TO PRIVILEGES OF UNITED STATES TECHNICIAN CLASS(SECTION 97.7(D) AND FURTHER LIMITED TO MAXIMUM TRANSMITTER INPUT POWER OF 150 WATTS AND TELEPHONY ONLY.

FEDERAL COMMUNICATIONS COMMISSION

Ben F. Waple
Secretary

Above is a reproduction of the Amateur Radio Licence issued to Jim Goding VK3ZGG by the American Authorities.

HIGGINBOTHAM AWARD

The Publications Committee had great difficulty in reaching a decision as to who should be the recipient of the Higginbotham Award for 1965, and for this reason the announcement was delayed to give the committee extra time to consider the matter.

As the committee could not separate two contributors, it was agreed to share the Award between Mr. J. R. Cox VK6NJ for his work "The History of Communications" and Mr. P. M. Williams VK5NN for his contribution on single sideband equipment.

The awards have been sent to both gentlemen.

W.I.A. PRESIDENT'S REPORT

(Continued from Page 19)

Herbert Hoover, Jnr., speaking on the principal problem of I.T.U. conferences dealing with Amateur frequency allocations pin-points the most important aspect when he says . . . "If we fail to meet the problem of protecting our allocations, there will be a very serious disruption of international Amateur Radio as we know it today;"

As Federal President of this Institute I am more than happy to know that the I.A.R.U. is rising in defence of the Amateur Service in this way, and it behoves this Institute to back the I.A.R.U. effort with everything it has. I believe we must do this in three main ways.

1. To form a permanent liaison committee or working group to maintain close contact with our Postmaster-General's Department. The Committee to be composed of members with special experience in this field.
2. To convene within the next two years a conference of Region III Amateur Societies.
3. To finance our representative to attend Region I and Region II I.A.R.U. conferences.

President Hoover concludes . . . "In my opinion the survival of Amateur Radio, as we know it today, will depend upon our individuel effort in the immediate future. There is no time to spare!"

Executive has already received a long report from the N.Z.A.R.T. on the issue of holding a Region III conference. An invitation, which unfortunately we had to turn down at this stage, was received from Mr. John Clarricoats, President of the Region I bureau of the I.A.R.U., inviting the W.I.A. to attend their conference to be held during May, 1965, at Opatiji in Yugoslavia.

I leave this matter with the Federal Council for its deep consideration if the W.I.A. is to play its rightful part in Region III.

In closing I record my grateful thanks to members of Executive, the Federal Council and Divisional Councils for the time they have devoted to conducting the affairs of the Wireless Institute of Australia for and on behalf of the Amateurs of Australia.

—G. M. Hull, Federal President, W.I.A

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OTL/73

DX

Sub-Editor: ALAN SHAWSMITH, VK4SS
35 Whynot St., West End, Brisbane, Qld.

Conditions at present appear to be a little slack or maybe it is lack of activity generally. During the winter months things quieten down, too, on the local scene. However, openings are being reported on 28 Mcs.

NOTES AND NEWS

Trucial Oman: MP4TBO Roger QRV 14,198 around 2200z. Call 5-10 up.

Quatar: VS9AFR, VS9QBI, VS9HRV, VS9PRV all will be active from here soon.

Ceylon: 4S71W Ian on daily from 0130z. Listen 14,125.

Rockall Is.: One day activity only is expected to take place from this spot in early June. No other information available.

Aland Is.: OH0NF 14,241 at 1830z or later.

French Somaliland: FL8RA still going strong. 14,045 2100z. QSL W2LJX.

Algeria: 7X2MD 14,250 1800z. QSL VE3EUU. Also on is 7X2AH 14,217 and A1 mode. QSL WA4STL.

Seychelles: VQ9EF 14,243 1900z and Ted, VQ9TC 14,230 2200z.

Sierra Leone: Peter 9L1HX operates around 14,225 2200z. QSL VE4OX.

East Carolines: KC6BW works 14.255 around 1330z.
The above by courtesy of LIDXA.

Gibraltar: ZB2AP is a R.A.F. Club station and active daily using a.m. 14,210 1730z onwards.

Somali Rep.: 6O1AU Smitty is active again. He hopes to operate soon as JY1AU and YI2AU. More information if it comes to hand.

Falkland Is.: VP8HD and VP8HJ both working 14 c.w. QSLs VP8HD—G3PEK, VP8HJ—W2CTN.

Za-Land: DL7FT will **not** make this trip as planned earlier.

Sao Thome: CR5SP now has s.s.b. rig and can be found on 14,100 Kcs. 2100z.
The above by courtesy of AIRWAVES G3UGT.

Sudan: ST2BSS on 14,234 2100z. QSL U.S. Embassy, Khartoum.

Gough Is.: S.s.b. equipment is being shipped to ZD9BE. He can also be heard on c.w. 20 mx.

Afghanistan: YA1AW is heard occasionally around 14,200. Try listening at 1200z.

North Borneo: 9M6AP and one or two others are QRV both s.s.b. and c.w. 20. 9M6AP's QSL goes to G3TXE.

Desroches: Proposed trip by VQ9HB is now reported **off.**

Tunisia: F7EU will attempt to put a signal out from here early June. Says he does not as yet have a permit. Mode s.s.b. mainly 20.

ACTIVITIES

Ken VK3TL reports working these choice ones on 20 mx: CP5AD, F9UC/FC, GC8HT, GD3ENK, GW4NZ, HB0ABS (Liechenstein), HI3RAP, IT1AI, OH0NI, OX3JV, SV1BL, TI8RS, VP2AC, ZF1GC, 1M4A (Minerva Reef), 5W1AX, 7X2MD, 9M6NQ. QSLs received: FS7RT, FL8RA, FL8AA, PJ5BC, 9F3USA, VP5RB, CE6EW, VE8CO Zone 2. XT0H, 4W2AA, VO2ME, YK1AA, YA1AW, VR5AB, EI3S, 5T7H and lots more.

Dud VK4MY reports conditions as picking up and worked some nice ones on 14 c.w. LA8PF, DM4UBO, OH4OZ, UL7RR, OZ5DX, GI4RY, VE7ANP, LA1H, UW3BX, 6Y5XG, G3ESF, VS6FO, VS9MP (Maldive Is.), VE1RB, LA8SJ, CR9AH, etc.

Chas, VK4UC, who is now chasing WPX logged the following also on 20 c.w.: 6Y5BB (who says 6Y5MJ has already returned to VE-land), HR5LB, PJ3CI, IT1AI, OZ4N, OZ5DX, LA1KI, 9V1MT, ZC4CI. QSLs from VR5AB, GM3JDR, KS6BR, KW8EK, 6Y5MJ.

Peter VK4PJ reports the 10 and 15 mx bands as open and lists the following QSOs: 21 Mcs., VE7PV, 9Q5YL, G6XN, SM5BLA, G3UML, SM5CQF, SM5LZ, HL9KW, HK3AW and many, many JAs and Ws. On 28 Mcs., HP1SC, KH6CSJ, and several Ws both east and west coast. On 14 Mcs., FB8UU, UQ2PD, HB9XJ, UA1CK, G3NJB, UR2AR, KL7EDY, BV1USA, BV1USF, GI3IVJ, CN8AP, SM2ABX, VE8BW, OE1MEN, 9Y4VP and more. Mostly between 1030z and 1200z and s.s.b. mode.

QTHs

ZF1GC—C/o Bodden Town, Grand Cayman; GD3ENK—via R.S.G.B.; F9UC—DL9PF; 5W1AX—KS6BT; VP2AC—WA4AYX; HB0ABS—HB9ABS; VP9CP—Box 275, Hamilton; VP2KD—VE3ACD; VP9FK—Box 509, Hamilton; VP1PV—VE3BRG; MP4BDP—via R.S.G.B.; VP5RB—W4RC; VP2SJ—VE4OX; KA5RC—via W2CTN; 5H3JR—W2SNM.

My thanks to the month's contributors: LIDXA, G3UGT, Fla DX'er, VK3TL, VK4PJ, VK4UC, VK4MY and Chas. Thorpe. Once again let me make a plea for more OCEANIA news items. Always needed.

Good hunting, chaps. 73, Al VK4SS.

— . . . —

PRECIS OF THE RULES FOR THE 1966 VENEZUELAN INDEPENDENCE CONTEST

Contest Period: 0000 G.M.T., 2nd July, to 2400 G.M.T. 3rd July.

Contest Operation: Call "CQ Venezuelan Contest" on 3.5 through 28 Mcs. on a.m. or s.s.b. Single Operator—All bands and single operator—Single Band entries will be acceptable.

VK stations are permitted to work YV and other American countries.

Exchange a 5 digit number consisting of RS report plus a 3 digit contact number starting with 001.

Scoring: 1 point per contact with "other American countries," 2 points for contact with YV stations except on 7 Mcs. 1 point per contact with YV stations on 7 Mcs.

A multiplier of 1 for each country (A.R.R.L. list) and for each Call Area in YV (1 to 9) and U.S.A. (10 to 0).

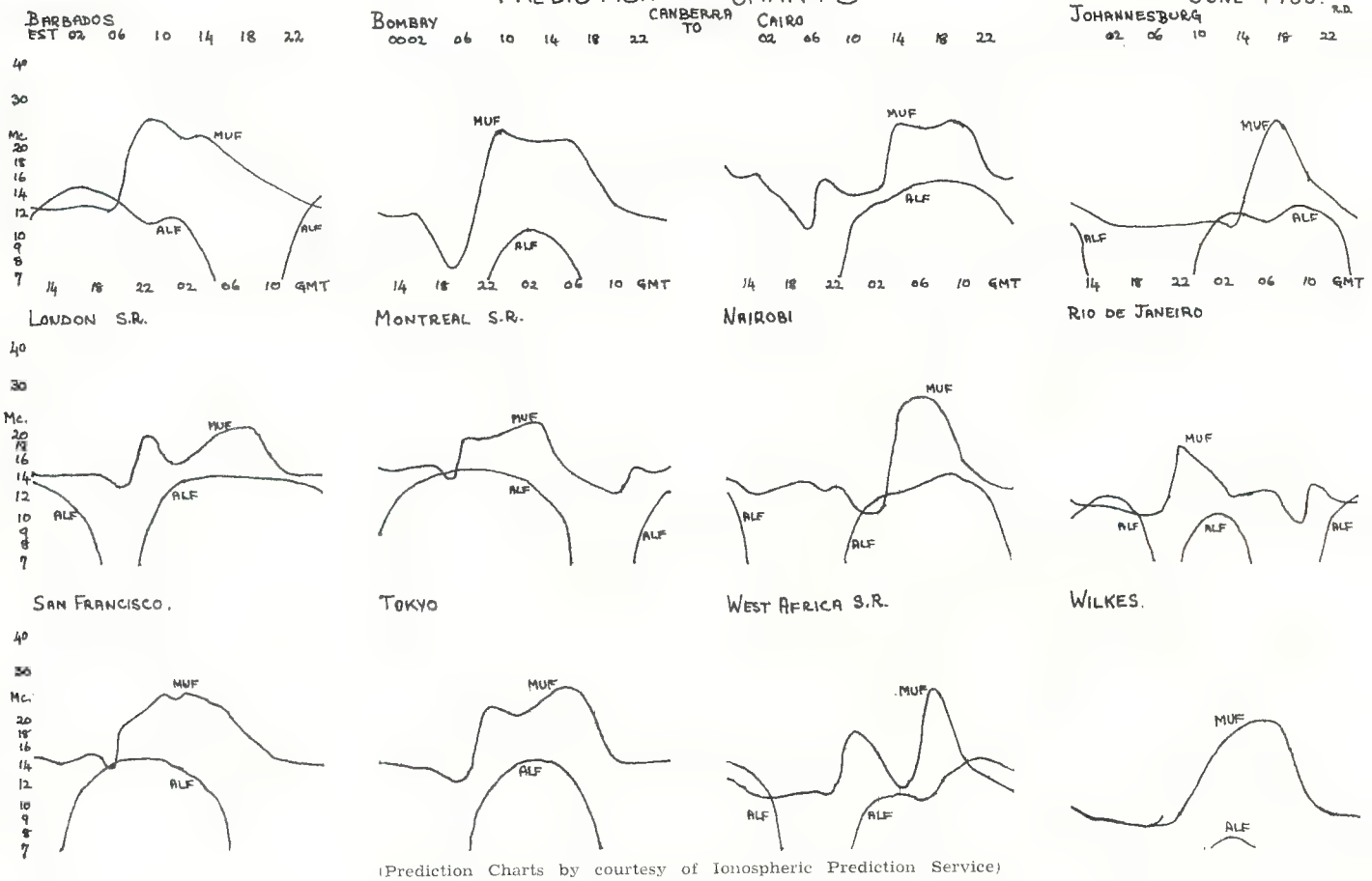
The total score for each band is the number of contact points multiplied by the number of multipliers. The total all bands score will be the sum of the contest points in all bands by the sum of the multipliers of all bands.

All contestants must compute their own score on a separate summary sheet.

Logs: A separate log must be kept for each band. W.I.A. log format is satisfactory.

Logs postmarked not later than Sept. 15, 1966 to Radio Club Venezolano, Concurso Independencia de Venezuela, P.O. Box 2285, Caracas, Venezuela.

PREDICTION CHARTS — JUNE 1966.



(Prediction Charts by courtesy of Ionospheric Prediction Service)

VHF

Sub-Editor: CYRIL MAUDE, VK3ZCK
2 Clarendon St., Avondale Heights, W.2, Vic.

First of all, many thanks to Len 3ZGP for the excellent job he has done over the past 12 months or so in editing this section so that it is in a readable form. Well, I hope that I am able to continue Len's work and keep up the standard.

The news over the past month has been varied with reports that VK4s are working JAs on 6, and JAs hearing VK3s on 6.2 No 2 metre activity in VK6, but plenty of 6 mx activity. Well everybody is allowed to choose his bands so I will leave the general reporting to the various correspondents.

There is only one thing left, will all correspondents please try to get their notes to me by the 1st of the month prior to publication. 73, Cyril 3ZCK.

NEW SOUTH WALES

V.h.f.-wise, things have been reasonably quiet during the last month. There appears to be little activity on the 52 Mc. band at the moment, but 2 metres is fairly active, both on the a.m. end of the band and on the 146 f.m. net. Quite a few new call signs are appearing on the band and even 432 Mc. seems to be attracting some attention.

The new committee has been settling in fairly well, and with two of them personally attending the last morse exam (ZIW and ZEX) it is to be hoped, therefore, that our committee will shortly have two full calls.

The newsletter has had to be suspended unfortunately, due to the falling subscriptions making it uneconomic to continue production. It is regretted that we have had to do this, but as the publication was gratis, costs were beginning to get out of hand.

As the St. Mary's Radio Club is holding a convention over the Queen's Birthday week-end, we will probably be co-ordinating with this group, in lieu of holding a separate "mountain top" week-end. There will possibly be a message handling contest held over this week-end during the evenings. Further details will be released through the usual channels. The May meeting will be a lecture by Les Jenkins VK2ZBJ on the practical applications of Fairchild transistors. Well, that about sums up the current activities of the group.

I would, however, on behalf of the group, congratulate the Melbourne University group on their "Australis" satellite project. We wish them the best of luck with it. Till next month. 73, Stephen 2ZSK.

HUNTER BRANCH (VK2)

52 Mc.: This band has been dull over the last month. The locals have kept the net going each Saturday and Sunday and holidays at 10 a.m. One break-through was heard by 2ZUB on April 17 at 9.45 a.m. or thereabouts, a couple of VK3 stations were heard off the back of his beam about strength 5/5. Noise made it hard to identify call signs, although it is possible it could have been a VK3 mobile north of Newcastle.

Dave 2ZFR has a 6 mx converter going and a tx with 6146 final just about finished. Colin 2BCC also has a converter going, and building a tx. Others with converters for this band include Ian 2ZIO. Allan 2ZAX, ex-6ZDM, has tx and converter for this band and hopes to be active in the near future.

144 Mc.: This band is fairly active on most nights. Monday nights after the "Admiral" (Gordon) 2ZSG relays the Hunter Branch broadcast on the 144 Mc. band from 80 mx, the following stations are usually heard: VKs 2ZKW, 2YT, 2ZSG, 2ZFR, 2CN, 2ZFX and 2ZWM. Others can be heard most Monday nights and are fairly active on other nights. Mack 2ZMO is back on the band after having been confined to the cot for some weeks with an infection.

Latest additions to the V.h.f. Hunter Branch "Weird Mob" are Ian 2ZIO, who is making good use of a 522, and Frank 2ZFX, who is running a 3/12 and making a loud noise. On a Monday night a few weeks ago, Gordon 2ZSG had ZL2TAX visiting him in the shack, and after the Hunter Branch broadcast he spoke to many of the locals, giving them information on v.h.f. activity in New Zealand. As he was due to leave Newcastle in a few days to return to N.Z. he was only able to meet a few of the locals.

Mac 2ZMO has nearly finished a new 144 Mc. tx for Ron 2ASJ of Stockton (suburb of Newcastle) and has had some fine QSOs, but he still has a few bugs to iron out. Tony 2ZCT has gone to Sydney for some months for a "refresher course" for his employer. As Tony is our local transistor expert, we hope he gets a few new ideas from the Sydney boys. Sydney stations are heard and worked on 144 Mc. at times mostly by stations in good locations and running high power.—Mac 2ZMO.

VICTORIA

VK3 activity has not been of a very high level, although we have had a short opening to VK4 one Sunday last month. The only other 6 mx DX heard has been Interstate Channel 0 and a short opening to VK7. Two metres has had a little DX with openings to Mt. Gambier, Northern Tasmania and VK3 country districts.

The V.h.f. Field Day season has finished and the final scores received are: Oct. winner, George 3ZCG, 2338 pts.; Nov., Cyril 3AEE and Graham 3ZAA, equal 2502 pts.; Dec., George 3ZCG, 2030 pts.; Jan., Jack 3ZJF, 1762 pts.; Feb., no scores received; March, Peter 3ZPA, 1150 pts.; Overall Winners, George 3ZCG, 6385 pts.; Graham 3ZAA, 3218 pts.; Cyril 3AEE, 2592 pts.; Jack 3ZJF, 1762 pts.; Les 3ZPB, 1422 pts.; Peter 3ZPA, 1150 pts. Also scores were received from 3ZJX, 3AVP and 2ZEO.

Other news this month includes that of "Australis", the Amateur Satellite being developed by 3ATM in conjunction with the Melbourne University Astronautical Society, and the Wireless Institute of Australia. A test package containing a duplicate tx was launched by balloon on 1st May and it successfully passed its tests. The 28 Mc. beacon tx will be tested soon, followed by other units over the next few months.

The 2 mx fox hunts and scrambles are the only set events in VK3 that attract any numbers. Well that is all for this month.—3ZCK.

N.W. Zone: 3ZGU has a neat 2 mx mobile rig almost completed and is waiting on crystals and time to fit it into the car. Noel 3ZGZ is in the midst of painting and hanging curtains, etc., in a new radio room. Unfortunately he was unable to get on the air for this DX season. Noel will be operating on 6 and 2 mx and with a little bit of luck 1 mx well before the next DX season. More than likely low power tx's will be constructed first, with the idea of using them on net frequencies when the higher power tx's are completed.—3ZGZ.

TOWNSVILLE DISTRICT (VK4)

The main news this month is the long awaited appearance of the JAs. Weak JA1 and JA7 signals were heard during February and March, but no stations worked. However, April was excellent with almost daily openings into North Queensland around 1330-1630 hours E.A.S.T. Other openings occurred at 1700, 2000 and 2300 hrs. E.A.S.T. On April 11 an opening took place at 0200 hrs. Signal strengths were high with little or no QSB. Scatter stations were heard at good strength approximately half an hour before most openings. A number of commercial f.m. stations could be heard between 51-52 Mc.

The only active 6 mx stations in Townsville, Graham 4ZGJ and Bob 4ZRG, were on hand at almost every daily opening. A number of fine QSOs resulted, with most of the JA stations speaking fair English. Lance 4ZAZ, in Rockhampton, was heard here on two occasions obtaining his share of the DX.

Southern 6 mx openings are still around with Channel 0 stations being heard around 1100 hours. VK2 and VK3 stations worked in early April, but little activity on the band.

From Ayr (40 miles south of Townsville) the news to hand is that Ross 4RO has returned from an enjoyable seven weeks round Australia holiday, while Dale 4ZDG is mixing electronics with pistol shooting and making a fine job of both.—Bob 4ZRG.

WESTERN AUSTRALIA

With apologies for the absence of last month's notes, here is a short summary of the DX season in the West.

The 1965-66 season was, for the southern part of the State at least, very poor. Although early openings in November showed promise, and a good season was expected, openings were disappointing, being short and patchy, even over the usual Christmas-New Year week.

DX-peditions to Esperance and Albany proved largely fruitless, in sharp contrast to previous years. The surprise of the season was performance of Tony 6ZDT at Meekatharra, 400 miles N.N.E. of Perth. Despite limited hours of operation, Tony worked into VK2, 3, 4, 5 and possibly VK7—I cannot verify this at the time of writing. The call mainly heard at Meekatharra was VK2, which is normally not very common in this State. Tony reports openings as lengthy and often very good. He also heard JA on 50 Mc., but could not raise any.

Another remarkable feature of Tony's DX season was the appearance of short skips to Perth and 6ZDS in Albany.

On the 2 mx front, no actual contacts were made. However, Tony at Meekatharra reported reception of Channel 7 Sydney for a period of several hours at considerable strength, and high band t.v. openings (up to and including Ch. 10) were reported at various times from Kalgoorlie (6ZDC) and Mt. Barker (6ZCD) and a contact in the mobile radio field reports openings East on the high band mobile frequencies (160 Mc. approx.). These manifestations, and the difficulty some country stations—notably 6ZCN Bunbury—are experiencing with t.v.i. and power line noise, is causing an upsurge of 2 mx interest in VK6—long an exclusive 6 mx State.

Activity in Perth is still confined in the main to the f.m. channel on 52.656. Stations such as 6DI and 6DP have even been heard, and Wayne 6ZDD has gained a long sought after call sign. Hooray, and all that!

The 6, 2 and 432 beacons are still running almost continuously. The long awaited lifting of the 2 mx aerial to the dizzy height of 20 feet has improved reports from more distant stations, often quite considerably. Tom 6TR and Brian 6VV at Quainading are both keen on 2 mx and have been on 6 using a 50 ft. tower and a most impressive antenna system, putting some excellent signals into Perth.

Again, apologies for the absence of previous notes and for the vagueness of these, but as I am at present far to the north of Perth, and with a cyclone up here and a mail strike in Perth, you will be lucky to get them at all. See you on 2 one of these years.—6ZCF.

— . . . —

Publications Committee Reports That . . .

All mail received up to the first mail of the 9th May was considered at the May meeting.

Correspondence was received from VKs 6EP, 2AND, 2QL, 2ZTM, VK6 Division, C. E. Brown, Thomas Roberts, Harry Major, and technical articles from VKs 6VK and 2ZRY.

VK2QL was the only one to respond to last month's request for comments on the Prediction Charts. His suggestions were received to late for inclusion in June issue, but will be acted upon for the July issue.

In each issue of "Amateur Radio" there is a notice on page one stating that all correspondence should be addressed to—

The Editor,
"Amateur Radio,"
P.O. Box 36,
East Melbourne, C.2, Vic.

Inconvenience and delay are often caused by matter being addressed to the private address of the Secretary to the Publications Committee. Correct addressing will save time and trouble all round.

The Committee also discussed possible publication dates for the 1966-67 issue of the Call Book. From reports to hand it would appear that all Divisions under-estimated their requirements of the last issue, and as we print only enough to fulfil firm orders, no extra copies are available. As soon as publication date is decided all Divisions will be advised and we stress the importance of them advising us of their requirements, before we go to print.

Some contributors of notes are not submitting their material in the correct format. All contributors are requested to check previous issues of "A.R." and follow the instructions that have been published.

COPY DATE

As from next month copy date for all material for publication will be the 5th of the month except for January when the copy date will be 1st December. Remember, copy for August issue is 5th July.

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SWL

Sub-Editor: D. GRANTLEY, WIA-L2022
Alexander Ave., Hazelbrook, N.S.W.

I was very disappointed to read the results of the 1965 VK/ZL contest in the April issue, for once again only 12 of our many listeners are listed as having taken part. As we all expected, the top three places were filled by the c.w. men, who as I said once before have this contest at their mercy, and whilst the contest is "Receiving Open" for the s.w.l's, this condition will persist. Peter Drew as usual topped the overall score with 11,040 points, which was a fine effort and is probably a record for this event. (Any former figures available, Eric?) Now that winter is coming on, we look to our next VK contest, the R.D. Now is the time to start the big overhaul of your gear, check those faulty tubes, poor antenna connections, alignment, put some carbon-tetrachloride on the noisy controls, and in general, bring the gear up to a standard which will enable you as an individual operator to make this fine contest a success.

DX News. KS6BO has been heard regularly on 40 metres s.s.b. from 0730z most nights at good strength. BV1USA and OX3JV have been logged by Alan Raftery around 0830z nightly around 14.3 s.s.b. at good strength. The latter's QSL manager is SM7ACB. All QSLs for 4W1SS heard recently, should go via the R.S.G.B. YA1AW should be active at present, with QSLs to K5GOT. Should you hear 3A2DA it is most likely to be a pirate, and the call holder would like to hear full details of any reception of this call. His address is Geoff Haynes, Sans Nom, Fir Tree Road, Leatherhead, Surrey, G.B. VK2NN was recently reported in an English publication as having logged on 10 metres at Farnham in the U.K., on a 10 tube super with a 30-ft. wire around the picture rail, whilst in the same magazine VK5VA is reported on 40 metres by a s.w.l. using a 20 metre vertical.

Overseas S.W.L.s This month we greet a well-known listener from Great Britain, Bernard Hughes, whose name is readily recalled as QSL ladder and tape section manager for the I.S.W.L. in London. Details of his gear are as follows: rx is an Edystone 840c, with a Codar PR30 preselector fed by a 20 metre dipole and a 66 ft. long wire. One of the features of Bernard's listening has been his award hunting, and to date he has the Ockenden Venture Award, Newark News Awards for 25 and 50 countries, United Nations Class 2 for 55 countries, U.N. Class 3 for 40 countries, several country awards from the I.S.W.L. plus their 20 zone award, P.E. Monitor Certificate and Radio New York World Wide S.W.L. Club Gold Certificate. Other awards have been applied for. Countries heard are 125 with 77 confirmed in 29 zones. He has to date heard 289 prefixes with 145 confirmed.

On the tape side of the hobby, Bernard uses the following machines: Truvox R92, Philips EL3552, Elizabethan TT3, A.I.W.A. TP703, and Garrard SP25 special transcription deck. At the moment he has 27 tape contacts in nine countries including one /MM.

Around the Shacks. Firstly over to VK6 and Bryan Prossor who as usual reports in by tape, and a very fine job of recording too, Bryan. He has been listening fairly often, and reports good conditions on 15 metres where he located many G, W and JA stations. On the old standby 20 metres VS6FO, K8ZHA/MM, ZS6RB and LA7RF were a few of his loggings. Inward QSLs for Bryan included GI3JIM, DL7BQ, W6IBU/KG6, YK1AA, OA4QW, EP3AM, 9M2SS, LA5YE and HB9MU. If we don't hear from Bryan for a few months some of you VK5 boys had better set out across the Nullabor to look for him, as he plans to set out for Adelaide in June. And whilst on the subject of that fair city, a letter to hand from Alan Raftery indicates that he is still intent on the next A.O.C.P. examination, but was able to hear quite a number of American s.s.b. and a.m. stations on 7 Mcs., whilst on 20 he heard all continents on s.s.b., plus EA3JE, several W's and a VE on a.m. From our senior VK2, Chas, Aberneathy, I had a long and very interesting letter.

Chas. wishes to remind anybody interested in card swapping, that he has names and addresses of many s.w.l.'s throughout the world who wish to swap, and a s.a.e. to his address, 30 Urunga Road, Miranda, N.S.W., will bring you further information. Band conditions here in Sydney are still extremely good, and here at L2022, I have continued to find much of interest on all bands except top and 10 metres. Whilst nothing new has been located, conditions have made the search a pleasure. Let's hope it continues. It is with much pleasure that we welcome back to the fold our VK7 supporter Greg Johnston who has just returned from a short spell at Macquarie Island. Greg is now QSL manager for Col VK0MI, a task which will keep him fully occupied. Up here is VK2 Mac Hilliard who reports good signals from W land on 10 metres. This is the best report I have had to date on ten, and is quite significant, as his QTH over in Kingsgrove would not be the best for DX. Mac has now moved up a little higher in the DX ladder with 245 heard. I could write a full column on the activities of Ernie Luff, who seems to be intent on catching the leaders. Prefixes heard at his QTH in Elizabeth Vale, S.A., include FK8, CT1, VE, YV1, EA4, LA9, 4X4, KG6, UA2, TI2, HK2, ZS6, EP3, DL, OK1 and DU7. New confirmations were YN1CML and KR6MB.

I have no s.w.l. reports from VK4 this month, however, Chas VK4UC reports excellent conditions on all bands, particularly on the DX front in the late afternoon. Chas. has been most helpful in supplying QTHs and information for this page, and I am sure we all appreciate such assistance from one of our top DX men. He uses a Geloso v.f.o./buffer/6DQ5 into an inverted vee, and gets out exceptionally well with his 30 watts Rx in an AR7. Ray Kearney L2287 logged the following prefixes on his completely rewired AR7: LA, EL6, OE2, OX3, CN8, CT1, EA8, KP4, VP5, YN6, HI. UH8, UI8, UJ8, MP4, XW8, YS, FO8 and ZL5AA. Ray, as well as overhauling the AR7, has erected a long wire antenna, 130 ft. long and 35 ft. high. Warwick Smith L3211 has been working on his Rx of late, thus has not done a lot of listening. However, he did manage FB8YY, HB0ABS, CT1, VP2, HR1, TG9, 6Y5, YN1 and many others. A new card received was WB61P1/KJ6. Bob Halligan L3229 received cards from W6IBU/KG6, VS6EQ. EP2BQ, OK1ADP, UA4KED, VK0MI and 9M2DK, wth a new country heard, EL20. Bob has been concentrating on 6 metres and has a new GP up 30 feet.

Down to VK7 and Bob Mutton who lost his dipoles, however, he reports plenty of W's on 7 Mcs. at 0700z. Inward cards include HB9GN, SV1AE, SM5BNX and VS9OC/. A late letter from Ernie Luff encloses details of the G award for s.w.l.'s. The G award is made to any s.w.l. who can produce QSL cards as proof of contact with 12 G stations, resident in the United Kingdom, all on 20 metres phone (a.m. or s,s,b.), but not c.w. The 12 contacts must include GI, GM and GW, and three of the contacts must have been working a member station of the Elizabeth Radio Club. All applications to Ernie, Club Secretary, 5 Shaftesbury Road, Elizabeth Vale. Ernie has just received cards from VS6FS, CCT1LX, F8GV, CP6FR and OX3JV. Finally to Peter Drew over in VK6. On 10 metres he logged only 9V1LP, KR6BF and VK9DR and a few JAs. 15 metres still loaded with JAs plus 7Q7PS, 4S7DA, DU6TY, MP4TBO, SM5OQ, ZS3HT, ZE1CB, ZE2JA, 9N1MM, ZE3JU, ZS2OM, 9V1NP and W6KXZ, most on s.s.b. On the other bands the conditions in W.A. have been similar to those of the eastern ones. Peter has given me a long list of calls heard on the other bands, but lack of space does not permit me to print them. Congratulations to Peter on your fine top score in the last VK/ZL. I will be in Melbourne for most of June, so hope to meet many of the VK3 group then. Tapes to hand this month include Bryan Prossor of VK6, Bernard Hughes of England with a rundown on conditions in that country, and a very interesting spool from VK3 I.S.W.L. member Doug Head of South Yarra.

Queries and Answers. Bob Mutton, in answer to your query re the operation of VK9TL, Ken has written to say that the only legal operation of that call was from 3/1/65 to 30/1/65, and he is the only holder of the call. Therefore we can assume that there is a pirate about. Wanted by L4164, John Davidson of Lister Street, Sunnybank, Brisbane, the circuit of an STC A679H. The circuit or handbook of the Grundig type 4090WE is required, and any information on this should be sent to Chas. Aberneathy. Bryan Prossor of VK6 is in trouble with his Murphy B40, and wonders if any of our chaps can give him a list of substitute tubes for it. The elusive RA 3160 whom Chas. has been trying to run to earth, has turned out to be L2054. How about letting us in on the mystery old man? Bob Halligan, QTH of VS9OC is Royal Air Force, Masirah Amateur Radio Club, B.F.P.O. 69, Masirah Is. Or via R.S.G.B. bureau.

DX LADDER

A close perusal of this list will note some interesting changes in the lower positions, and a few deletions.

	Countries Cont.	Countries Hrd.	Zones Cont.	W States
E. Trebilcock	292	296	40	50
P. Drew	188	265	38	40
D. Grantley	133	295	39	35
W. Smith	126	207	34	7
A. Westcott	106	159	34	11
R. Kearney	104	170	37	8
G. Earl	101	167	33	18
M. Hilliard	96	245	33	14
E. Luff	70	121	27	6
C. Aberneathy ..	66	105	33	14
A. Raftery	62	186	26	11
R. Halligan	61	154	27	3
B. Prosser	60	180	17	8
R. Mutton .. .	50	100	27	10
B. Mackintosh ..	41	102	20	5

VK3 NEWS

The mail today brought the first copy of the new publication from the group, "Zero-Beat." A lot of time and care has gone into this effort, and it deserved the support of all s.w.l.'s. For further information write: M. Krochmal, 3/20 Hillside Avenue, Caulfield, Victoria.

That winds it up for this month chaps, thanks for your interest, and look forward to hearing from you all again in a few weeks.

73, de Don L2022.

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FEDERAL AND DIVISIONAL MONTHLY NEWS REPORTS

(SEND CORRESPONDENCE DIRECT TO DIVISIONAL REPORTER NAMED AT PARA. END)

FEDERAL QSL BUREAU

The following change in the A.R.R.L. QSL Bureau set-up is effective immediately:—

W2—North Jersey DX Association,
P.O. Box 505,
Ridgewood, NJ. 07451.

PY7ACQ Plinio, was scheduled to be active c.w. and s.s.b. 7, 14 and 21 Mcs. from April 6 to April 12. QSLs should go to Brazilian DX Club, Box 842, RECIFE, Brazil. Envelope and 3 I.R.C. requested.

Results of the 1965 OZ-CCA Contest do not list any VK or ZL stations. The 1966 contest (15th) was staged April 30 and May 1 but information was received too late for publication in April "A.R."

Good to hear from Ted VK9TB, ex-VK2QM, Ted is active on 7 Mc. c.w. and anxious to give any new stations their first VK9.

The Independence of Colombia DX Contest is scheduled from zero G.M.T., Saturday, July 16, to 2359z, Sunday, July 17. Full details and log forms can be had from this Bureau.

Bruno Bossert HB9QO, who spent 1964 in Australia and desires to return on a permanent basis, took unto himself a wife, the event taking place near Lucerne on May 18. Congratulations Bruno and hope we will meet you both.

—Ray E. Jones, VK3RJ, Manager.

— • • • —

NEW SOUTH WALES

Friday evening, 22nd April, saw the resumption of the annual general meeting of the VK2 Division of the Wireless Institute, Crows Nest. The retiring President (Ivan Agar VK2AIM) took the chair and there was an attendance of about 50, including two visitors, Morrie Parsons (ZL1MC) a member of the N.Z.A.R.T. Council and associate member of the W.I.A., and Fred Carruthers (VK2PF), of Lismore, immediate past president of the Far Northern Radio Club.

The Auditor (Mr. Isherwood) presented the report and balance sheet. This showed that a surplus of £834 had been made on the year's operations, a substantial part of this amount being made by the Disposals Department. The overdraft at the bank was higher than it should have been, but it is expected that the recent increase in subscriptions will overcome this.

After the auditor had cleared up a number of points raised by members of the audience, he was accorded a vote of thanks for his assistance to Council and the Division.

A further vote of thanks was moved to all who had helped in any way with the work of the Division during the year.

Before closing the annual meeting, the chairman referred to the friendship that had been accorded him by members throughout the State during his term of office, and particularly mentioned the debt that we all owe to that small handful of workers who could be depended on to carry out their duties efficiently, year after year. He then offered his support and best wishes for a successful term of office to the incoming President, Tom O'Donnell VK2OD, who took the chair and opened the monthly general meeting.

The lecture for the evening was entitled "Control Circuits and Relays," and was delivered by Bob Barringer VK2ZIB. Bob proved himself to be a very able and interesting lecturer, and his talk, illustrated by many slides, was followed closely by the audience. Of particular interest was a model rotary beam antenna, which Bob used to demonstrate some of his relays in a simple circuit. This enabled the beam to be rotated either way by merely turning a switch. We are sure the publication of details of this gadget would be a popular move.

The usual vote of thanks to the lecturer was dealt with by Hans Ruckert VK2AOU.

The main business before the meeting was the presentation of a report by the Federal Councillor, Pierce Healy VK2APQ, on the 30th Federal Convention of the W.I.A., held in Brisbane over Easter week-end. Keith Howard, official VK2 observer, was also present at the meeting.

A considerable part of the report dealt with discussion on the proposed new Federal Constitution, with emphasis on the most contentious section dealing with the voting powers of Divisions.

This matter is one that is bound to create much interest and a great deal of discussion, both within the Constitution Committee and among members, before a decision is finally reached.

Apart from the Constitution, the Convention dealt with matters of policy, administration, I.T.U., P.M.G. and regulations and Contest items, and so many interesting details came out of the discussion that we could not possibly cover them in these notes. The report is being published in full in the VK2 Bulletin and we recommend that all members read it thoroughly.

Fred VK2PF complimented Pierce on the comprehensive nature of the report and a vote of thanks was carried in the usual manner.

Divisional Council has suffered its first casualty with the resignation of Morrie Marsden VK2VV, because of other commitments. Morrie had undertaken the duties of Minute Secretary and was a keen Councillor, and his resignation was received with much regret.

Membership of the VK2 Division continues on the up and up, 17 applicants being accepted into membership of the W.I.A. at the April meeting.

Our notes for the May "A.R." (if they managed to get through in spite of the mail strike) reported that W.I.A. history had been made with what is thought to be the first lady member of a Divisional Council, when Hebe Grouse VK2AOK won her right to sit at the Council table in the recent ballot. During April Hebe gave her first Sunday morning broadcast to members over VK2WI and I'm sure all who heard it will agree that she gave us a very well presented and newsy broadcast. Congratulations, Hebe!

A recent addition to the Club population is the Nepean District Radio Club, with former Divisional President, Max VK2MP, in the chair. Showing commendable activity, the members intend holding a Field Day on 12th June at the Penrith Civil Defence H.Q., which is located in the St. Mary's industrial area. Anyone living in this area with an interest in radio would be welcomed as members.

The W.I.C.E.N. members are still meeting regularly. At the present time they are conducting a series of "clinics" at W.I.C. on certain Saturday afternoons, when those with mobile outfits may bring them along and have them tuned up and put on frequency with the aid of equipment that has been loaned for the purpose.

The V.H.F. and T.V. Group have continued with their usual meeting and fox-hunts during the month. Of interest to those interested in V.H.F. DX, is the news that Alan VK2ABA was recently told by a JA that VK3 was being heard in Japan on 6 metres.

Two well-known conventions were held as usual over Easter week-end, one at Canberra and the other at Urunga. Both functions were very successful, there being 63 registrations and members of families totalling about 100 at Canberra, and 27 registrations plus XYLs and harmonics at Urunga. Divisional Council was represented at Canberra by the President, Tom O'Donnell VK2OD,, but Council's representative for Urunga, Charlie Wilkins VK2ALB, was held up in Brisbane by family illness and unfortunately was not able to attend.

Ken Mattei VK1KM has informed us that he will be forwarding notes of the Canberra "do" direct to "A.R.," so we will not duplicate them here. We are indebted to Bill Allworth VK2OE —Grafton Bill to his friends for the following information:

The Urunga Convention was held over the Easter week-end. There were 27 registrations, plus XYLs. The weather was perfect and all who attended enjoyed a very pleasant and entertaining week-end.

The Saturday evening social was held at the Urunga School of Arts, when supper was provided by the local Progress Association. The social on the Sunday night was staged at the Bellingen Bowling Club. Entertainment was provided by Mr. Noel Hansen VK2AHH on his Hammond organ, and Mr. Jack Greer, who sang several excellent numbers. Prizes for the winners of the competitions were presented on the Sunday night. The Convention finished with goodbyes on the Monday morning.

A telegram was received from Crieff and Jean Retallick VK2XO from Mt. Cook, New Zealand, sending their best wishes for the Convention.

Results:

7 Mc. Hunt: 1st, Brian Stark (Bellingen) VK2ZCQ; 2nd, Allan Lundy (Inverell) VK2ASI; 3rd, Jim Cummings (Sydney) VK2PM.

144 Mc. Hunt (Saturday): 1st, Allan Lundy (Inverell) VK2ASI; 2nd, Bill Sinclair (Tamworth) VK2ZVB; 3rd, Jim Cummings (Sydney) VK2PM.

144 Mc. Hunt (Sunday): 1st, Bill Sinclair (VK2ZVB). Bill was the only one to locate the hidden transmitter, which was hidden in a forest. None of the other starters found the way into the location, which was a challenge, as several roads led in the general direction but only one led to the transmitter.

Urunga Scramble: 1st, Dave Davies (Newcastle) VK2BZ; 2nd, Reg Stockman (Inverell) VK2ATS; 3rd, Harry Crisp (Urunga) VK2LX.

73, Ivan VK2AIM

HUNTER BRANCH

Some members will have noticed the absence of notes for the Branch during the past two months. The causes of such omission were due to factors in connection with postal delays. Nevertheless, activity in the Branch has remained at a steady level and meetings have been held as usual. The April meeting was to have been addressed by a guest lecturer from Sydney, but, at the last moment he was unable to attend and a screening of two interesting films supplied by the Water Board was arranged. These films, "Heart of a City" and "Pipeline to the Clouds," gave some graphic illustrations of how dependent our communities are upon the public water supply and underlined the need for care in the use of this precious commodity.

It is usual now to call a committee meeting on the Tuesday after the monthly meeting in order to arrange the programme for the following meeting nights. All interested are asked to attend to assist with this important aspect of Branch activity. The gathering takes place at Bill Hall's residence in Bull Street, Cook's Hill, and the rather informal proceedings commence at 8 p.m. This applies to the Tuesday following the first Friday of the month. As a result of decisions taken, a worthwhile programme of lectures, demonstrations and social evenings has been arranged for the remainder of the year.

It is not too early to begin planning for the next Hunter Branch Field Day which will be held during the October long week-end. Because of developments in several fields, there will be some new equipment in us at this event this year. The 146 Mc. f.m. carphones are now fitted in some of the cars and it is hoped that quite a number will have them by October. In addition, there is talk of network operation on the 160 metre band using converted Pye taxiphones. It appears that the conversion to 160 is reasonably simple and since these are available quite cheaply from a local source, no difficulty should be experienced in putting them on the air. The Westlakes Radio Club has good facilities for both transmission and reception on this band and any members seeking a test signal should get in touch with 2ATZ or 2AWX to arrange a time suitable. The suggested net frequency is 1815 Kc., but members with other ideas of a frequency suitable should make them known to one of the committee members.

It appears that the duck-talkers are on the increase in the mobile field with Bill 2XT and Jim 2AHT being joined now by Col 2YJ. To prove that everything works just so, the rig has been fitted in the new Premier and a "shakedown" cruise arranged to the South Coast. From signals received, it appears to be working well. Whether or not it was arranged I am unable to say, but Bill 2ZL also has been absent for the past few weeks and rumour has it that he also is journeying on the South Coast. Could this be an omen? Yes, you've

SILENT KEY

It is with deep regret that we record the passing of:

VK2ANC—Frank Cook.
VK4EL—Eric Lake.
Ex-VK4RT—J. (Roy) Thorley.
VK6AB—Alan Buckie.

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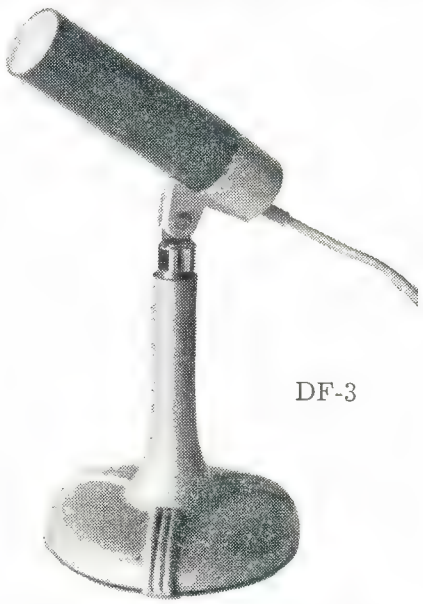

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guessed it. But 2ZL on sideband—it's frightening to contemplate. One result of the absence of the senior citizen is however that I can now tune around 40 and listen to all the signals without having the speaker cone bounce out across the table at regular intervals.

It is very pleasing to report that two new call signs now grace the v.h.f. bands. They are those of Frank 2ZFX and Ian 2ZIO. Frank is more or less a permanent resident of Newcastle and is likely to be on the air quite frequently, but Ian, being a public slave, like myself, has had a whisper of a transfer to the wild north west. How v.h.f. would go in the Pilliga scrub is not known to this writer. One thing is sure, however, there'd be little electrical interference. The wild Irish Rose still has not managed to raise the aerial above grass height, but his signal in Sydney is reported twice as strong as those with technically perfect radiating systems. This is due no doubt to the high quality of the string used in its construction.

Nothing whatever has been heard of the Cessnock contingent and it appears that the cold weather has driven them all underground. Arthur 2ZMU has one of the flash new carphones and hopes soon to be on the 146 f.m. net. Bill 2ZWM also has taken delivery of one of these exotic items and is well on the way to converting it for Amateur band use. I am told that one of our members has for sale three Class C Wavemeters. It appears that he now has no further use for them. The same gentleman would like to swap them for a clock which rings every five minutes. He says it's due to a change of emphasis—whatever that is. Colin 2BCC, exiled in Sydney, is still sending out some good phone signals. He's going to try the left foot next for some super c.w.

The calendar for the next few weeks indicates that there will be meetings on the 3rd June and 1st July at 8 p.m. in Room 6 of the Clegg Building at Newcastle Tech. Don't forget also that the Westlakes Radio Club will be holding their Annual Field Day at the Club on Sunday, 12th June. The usual full programme of events has been arranged commencing at 10 a.m. and a canteen is available serving hot food and drinks. See you at the Westlakes-Hunter Branch Field Day. 73, 2AKX.

CENTRAL COAST BRANCH

The last meeting of the Central Coast Branch of the W.I.A. was held at the School of Arts, Gosford, on April 15, 1966. The lecture for the evening was by Alec VK2AAK, whose subject was: "U.H.F. and 432 Mcs. in Particular." It was a most instructive and interesting talk especially as he accompanied it with sketches, a tape recording of a transmission by Dick VK2ZCF on 432 Mcs., and various pieces of gear and test equipment from his own shack. This included a veracter diode tripler, field strength meter, 13 el. yagi, 432 Parkes converter, band edge marker and wave meter. One of the outstanding points of the talk was the simplicity of building for 432 Mcs., keeping in mind that the skin effect is vital and, therefore, large surface areas in strips, etc., are essential. His coverage of the propagation was very interesting also. He reckons the construction for 432 has a certain relationship to plumbing. The members were disappointed when he had to rush the last part of the talk because of a shortage of time. However, as a result of this evening we may have a few more converts to the u.h.f. in the Gosford district. 73, Mona 2AXS.

BLUE MOUNTAINS BRANCH

The March meeting of the Branch was held at the usual venue in Lawson where at the annual meeting a new crew of officers was elected for the ensuing year 1966-67 and resulted as follows: President, Derek 2NR; Vice-President, Ron 2ADA; Secretary, Bill 2HZ; Treasurer, Alan Smith; Construction Committee: Bob 2ASZ, Trevor 2TM, and Don 2ARI, with S.w.l. Dan; Publicity Officer, Ron 2ADA. Retiring President, Don 2ART, outlined some of the events and progress of the Branch that had taken place during the past year. After the business end of the meeting closed, the evening rolled into the usual rag chews and supper.

Arie 2AVA and Alex 2EX had a week's mobile up north and were heard many times and by all accounts had an enjoyable week.

Noted some increased activity in the club in the last few months—let us hope it keeps up. Club Treasurer Alan has had a busy time, as he sat for the April exam. and just a few days before the exam. his wife presented him with a new harmonic, both well, so very fine business and congratulations to you and yours. Let us hope the same will be in order for your exam. Several weeks before the April exam., Dan and Alan enjoyed tea and biscuits at 2TM's Trevor QTH, whilst both were being tutored for the said exams.

Bill 2HZ has been busy on the air working new call areas with his new 14AVQ vertical—fine business Bill, glad to hear it is working out so well, whilst Trevor 2TM has been having trouble with wind and his vertical 18AVQ which is now converted to a 14AVQ and seems to be getting out very well.

Sid 2AVK has been down the coast at Wollongong for a few days. Overheard Sid putting a few people in the rightful place with his mobile. Atta boy, Sid! See you all—3rd Friday at Lawson. 73, Ron 2ADA.

CANBERRA RADIO SOCIETY

The Canberra Radio Society held its third annual Radio Amateurs' Convention during the Easter holiday week-end (April 15, 16, 17, 18, 1966). This is becoming an annual must in the eastern states and this year's attendance was well up to expectations. A full week-end of contests, technically interesting visits and social functions took place.

Highlights of the week-end were the visit to the Deep Space Instrumentation Facility No. 42 at Tidbinbilla with its 85-ft. dish antenna with a gain of 53 dbs., its r.f. amplifier noise figure of one-tenth of a db. at 2000 Mcs. and receiver loop selectivity down to five cycles bandwidth. The visit to the National Universities' Nuclear Physics Dept. also proved of great interest as also did the trip to Belconnen R.A.N. Transmitter, whose quarter megawatt transmitter causes some strange r.f. problems. New this year was the additional visit to the Mills Cross Radio Telescope which is nearing completion at Hoskinstown, not far from Canberra.

Contests included 7 Mc. and 144 Mc. fox-hunts and hidden Tx hunts. A receiver sensitivity contest was also held during the Easter Saturday picnic lunch in the pleasant surroundings of the Cotter Dam Reserve.

On the Saturday evening the convention dinner was well attended and following the formalities the visitors were entertained by a short talk and slide show by Steve VK1VK, ex-VK0VK, and Ken VK0KH on their activities in Antarctica.

There was a film show on the Friday evening and also on the Sunday night following the junk sale and prize-giving. The club is indebted to Mullard Ltd., A.W.V., Anodeon Semiconductors, Belling Lee, Aegis, Ducon, R. H. Cunningham Ltd. and the VK2 Division of the W.I.A. for providing equipment and components for prizes.

An interesting feature in favour of the Canberra Convention is the wide variety of sightseeing attractions with something for everyone in the family. The Canberra Radio Society encourages the family outing aspect of their annual event and discourages the idea of a group of Hams in a huddled bunch and another group of bored families trailing along behind.

The Canberra Radio Society is due to lose its club premises in the near future and has already disposed of its club station. It is hoped that this will not interfere with the plans for the 1967 Easter week-end. In fact, there are whispers that there will be even some new attractions with possibly competitions for the ladies, with prizes!

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These are some of the items carried in the store run by the VK2 Division. Both new and surplus lines are in stock. A catalogue is available by writing to Disposal Section, Wireless Institute Centre, 14 Atcheson St., Crows Nest, N.S.W.

OBITUARY

FRANK LESLIE COOK (VK2ANC)

It is with much regret that we record the passing of Frank Leslie Cook VK2ANC, whose death occurred on Easter Monday after a long illness.

Frank was licensed in 1934 and operated first under the call sign of VK2FF. Following the theft of his gear shortly before World War II he allowed his call sign to lapse, but after the war came back into the ranks again as VK2ANC.

He was active mainly on 7 and 14 Mcs. for some time, but in recent years operated almost exclusively on 144 Mcs.

Being one of the old school of Amateurs, Frank was a keen builder of his own equipment. At one time he worked in the radio industry, but for many years prior to his final illness he was employed by the C.S.I.R.O. as a mechanical draughtsman.

Apart from his interest in radio, Frank was very active in Parents' and Citizens' and Progress Associations in the Carlingford district, and the large and representative attendance at his funeral was an indication of the esteem in which he was held by many. The Institute was represented by Peter Campbell VK2AXJ (Divisional Council) and Ivan Agar VK2AIM, and the sympathy of all members was given to Mrs. Cook by sons David and Bruce.

ERIC LAKE, VK4EL

Eric Lake, VK4EL, of Belgian Gardens, Townsville, Qld., was born at Shrewsbury, England, 60 years ago. Came to Australia as a young man and took out his licence in 1932. He was employed with the P.M.G. in Townsville for the past years.

A prominent DXer of his day with DXCC 14, 21 and 28 Mc. and holder of many Awards, he took an unflagging interest in tutoring many young aspirants for their tickets.

Eric, as all those who worked him, knew, was a competent code operator with an immaculate fist and was a member of the R.S.G.B. and F.O.C.

He leaves a wife and two daughters.

JOHN (ROY) THORLEY, Ex-VK4RT

John (Roy) Thorley, ex-VK4RT, of Emma St., Mt. Gravatt, was aged 54 and was tragically killed in an automobile accident. He was a Past President of the W.I.A., Queensland Division, and also Secretary, who for some years devoted much time and energy to the promotion of W.I.A. affairs in Queensland. A notable DXer, he had more than average ability both electronically and technically. John received his ticket in 1935 and was well known amongst the phone men.

ALAN C. BUCKIE (VK6AB)

It is with deep regret that we record the passing of Alan Buckie VK6AB.

Although Alan's health had not been the best for some time, news of his sudden passing came as a shock to his many friends and associates in this state.

An old-timer in radio, Alan took out his call of VK6AB in 1936, and remained active until World War II put an end to Amateur Radio for some years. Alan joined the R.A.A.F. where he held the rank of sergeant until his discharge. He then worked for some time installing projection equipment in theatres but had little spare time to enable him to engage in Amateur Radio activities.

However, in recent years Alan became active again on 80 metres where he had many friends, in particular the members of the 8 a.m. "Shaving Patrol."

The sincere sympathy of the members and the W.A. Divisional Council of the W.I.A. is tendered to Mrs. Buckie, her son, two daughters, and son-in-law Graham VK6ZEZ.

VICTORIA

The Annual General Meeting was held at the rooms on Wednesday, 4th, with about 45 members present. The President's report and financial statements were read. There was no Treasurer's report as such as the acting treasurer was not available.

The division finished the year in a satisfactory position, showing a surplus on the year.

Questions were asked on a number of subjects ranging from the late arrival of notice paper due to the postal strike to the lack of sufficient workers in divisional affairs.

Queries on the Federal Convention were answered by Peter VK3IZ and Harold VK3AFQ. As a result of the discussion on the shortage of workers the outcome was that after the meeting two volunteers approached the secretary and made their services available.

It was agreed that a drive for more members will be made this year, as only about half the licensees in this state are in the Institute.

Although publicity on Council's activities is fully covered in weekly broadcasts, it was the opinion of the meeting that more could be done in this regard, as many do not listen to broadcasts. It was agreed that in future copies of council meetings will be placed on the notice board. Any member wishing further information on any item in the minutes can contact a member of Council.

The following will serve on Council for the coming year: Ken Pincott VK3AFJ, Tom Cuthbertson VK3ZIQ, John Battrick VK3OR, John Spicer VK3ZEL, Michael Owen VK3ZEO, Jack Taylor VK3ZJF, Ken Seddon VK3ACS, John Beckett VK3ZCB, Bill Roper VK3ARZ, John Wilson VK3ZOQ.

At the completion of the Annual General Meeting a short break was taken before starting the May General Meeting. After the routine matters were dealt with, the discussion came back to membership, due no doubt to the number of applications for membership received during the last month. It was the consensus of opinion that lack of knowledge on what the Institute is doing for the Amateur keeps many licensees out of our division and that some positive steps will have to be taken to remedy this state of affairs, one suggestion being the regular inclusion of notes in "A.R." This of course depends on finding somebody with the time to undertake this task on a regular basis.

The I.T.U. Fund was the subject of a long debate, as this Division has not yet reached half its quota. This is partly the fault of Council in failing to follow up the promises of donations made two years ago. This will be looked into in the very near future and a letter will be sent with the annual report and balance sheet to all members. Non-members will also be contacted just as soon as a list can be compiled. Additional publicity will also be given on broadcasts.

The June meeting will be a White Elephant Night, so come along with your surplus bits and pieces. "Flogger" Hepburn will be in attendance and those who have seen him in action know how adept he is at getting the last cent out of the buyers.

At the July meeting Cyril Maude VK3ZCK will speak on Anodised Aluminium Labels for Home-brew Equipment. Cyril will bring samples of these labels for display.

VICTORIAN STATE CONVENTION

The VK3 State Convention was held on the week-end of the 23rd and 24th April at Ararat, with approximately 30 members in attendance, plus some wives and families.

Fifty-five sat down to dinner on the Saturday night. After the dinner the ladies were despatched to the local picture theatre, where they were the guests of the management for the evening, leaving the members free to get on with the business of the Convention.

Reports were given on Divisional activities for the year, the Federal Convention at Easter and W.I.C.E.N. activities. Everybody appeared well satisfied as very few questions were asked and very little discussion held on the various reports.

This should not be taken as an indication that the convention was not a success, as much useful information came from informal discussions between Council members and those present.

On Sunday everybody moved to a local picnic ground for a barbecue lunch and a few competitive events, and a lot more "rag-chewing."

The afternoon finished with the presentation of prizes and afternoon tea.

Our thanks go to the members of the Western Zone for making the arrangements for the Convention, with a special thanks to Brenda VK3KT and the other ladies in the zone who worked like trojans to ensure that everyone was well fed.

We also extend our thanks to Mullard (Aust.) Pty. Ltd., Fairchild (Aust.) Pty. Ltd., Ham Radio Supplies, Wm. Willis & Co. Pty. Ltd. and McGill's Authorised Newsagency for the prizes they so generously donated.

WESTERN ZONE

We were all pleased to welcome visitors to our zone for the State Convention which was held in Ararat recently. Commercial s.s.b. gear was displayed during Saturday afternoon by 3YS and 3ATE. Harry 3ZX installed his home-brewed s.s.b. gear as a base station for the incoming mobiles.

The Hon. Murray Byrne, who opened the Convention, and the Mayor of Ararat, spoke of the good work done by Radio Amateurs by the way of better understanding between countries.

On the Sunday I think most of the time was put in replenishing the inner man, and by the way the steaks, chops and sausages were put away, credit must go to the two chefs, George 3GN and John 3AFU. Brenda 3KT also did a sterling job with the other eatable items. One thing went astray, the ice cream, which was overcarried to Stawell, so will have to blame the Railways for that.

Prizes were won by Harry 3ZX, home-brew gear; Garry 3ZOS, guessing frequency; Michael 3ZEO, v.h.f. scramble; Merv. 3LL, travelling furthest distance to Convention; Alf's (3LC) XYL won the ladies' quiz, with Shirley (David's 3DY XYL), missing out on the toss of a coin.

Thanks must go out to George 3GN and Neil 3AQD for all the work they put in for running of Convention. Neil did all the accommodation booking without a hitch.

Doings in the zone recently include: Herb 3NN and Garry 3ZOS have been busy modifying carphones on 2 mx f.m. and carrying out tests with 3AFU and 3ARM. Tony 5ZAI had a holiday from radio and dug himself a swimming pool and landscaped the garden with surplus dirt. He is now building a deltahet rx—one of these energetic types. Heard Barry 5YB with a good signal on 40 mx mobile. George 3ZEA and Gavan 3AEJ, of Rainbow, heard on 2 mx. Gavan getting better results with new converter.

Rodney 3UG visits zone occasionally. Last trip took back 3ARM's h.f. gear which will be re-built into a super duper rig. Bob decided this would be cheaper than getting some gear on display at the Convention. Bill 3ZAX back home in town of Nhill. Heard on 2 mx mobile occasionally. Rig is very neat, rack mounted under the dash. Builds towers in his spare time. Roy Goodwin and XYL relaxing now that the fire danger is over. Roy is going to the Civil Defence School in June. Lyle 3ASA still imparting radio theory and c.w. to budding Hams. C.u.l. chaps on hook-ups with more news for the notes and broadcasts. 73, Bob 3ARM and Bill 3AKW.

— . . . —

QUEENSLAND

The May meeting of the Queensland Division of the Wireless Institute of Australia's Councillors was held on Thursday, 5th May, in Brisbane. The following officers were elected for the various positions:—

Chairman: Lawrie 4ZGL.
Vice-Presidents: Al 4LT and Reg 4VX.
Secretary: Noel Wells.
Asst. Secretary: Bob 4ZRC.
Treasurer: Don 4DZ.
Minute Secretary: Lionel 4NS.
Disposals Officer: Carlo 4ZCV.
Inward QSLs: Jack 4JF.
Outward QSLs: Ron 4AQ.
"QTC" Editor: Lawrie 4ZGL.
Divisional Sub-Editor: Reg 4VX.
V.h.f. Rep.: Tom 4ZAL.
Librarian: Paul 4VS.
VK4WI Station Manager: Alf 4OL.
Assistant Station Managers: Al 4LT and Vince 4VJ.
VK4ZWI Station Manager: Lawrie 4ZGL.
Class Manager: Jack Morris.
Asst. Class Manager: Syd Carter.
Technical Officer: George 4XY.
W.I.C.E.N. Co-ordinator: Peter 4PJ.
S.w.l. Co-ordinator: Bill Jehn (Ipswich Amateur Radio Club).
Business Manager: Ken 4OF.
Y.R.S. State Co-ordinator: Frank 4TH.
Y.R.S. Liaison Officer: Chas 4UC.
Publicity Officer: Peter 4PJ.
Federal Councillor: David 4DP.
Federal Councillor/Observer: Reg 4VX.

The first job of the new Council was to examine all matters and decisions arising from the Federal Convention held in Brisbane over the Easter week-end. David 4DP, our Federal Councillor, gave a very comprehensive report on the deliberations, and after quite a lengthy discussion, all decisions were ratified.
73, Reg 4VX.

WIDE BAY REGION

I suppose that it is inevitable, that with a large number of Hams living in this area that some sort of convention would be held sometime. And such was the case. Over the May Day week-end, the Hams of the Wide Bay area got together at Ceradatus Creek, near Eidsvold. This is a very quiet little town, and its name is not of aboriginal origin, but is named after a town in Sweden, which obviously is also very quiet.

Over fifty people attended the Convention, including a large number of Hams. Roy 4ZWR, President of the Bundaberg Club, headed the Bundy contingent, and Doug 4PG was the captain of the Callide and Dawson Valley crews. The Bundy group got off to an early start and to save time, went via Mt. Perry, a very hilly route. But Rusty 4JM, overestimated the power of his model T and it stopped on a hill. Of course it was hauling a very large box on wheels, alright Rusty, trailer. Roy 4ZWR, who is the proud owner of a brown Corona, towed the model T and trailer safely over the hill. What was that? Wrong name? Sorry Roy, the smoke tricked me. I meant Crown Toyota. Arriving at the Convention site, aerials were erected, tents put up, gear got going, and a very neat little two-stroke battery charging plant stoked up. It sounded like an infuriated blowfly, but it kept going. The XYLs and YLs looked after the eats and the kids as usual had a good time.

Very early on Sunday morning, 4PG and his raiders arrived, and with the aid of some very large and noisy "Bungers," soon had everyone out of bed. In fact, so efficient was their awakening of the Bundy crew, that when I arrived around morning tea time, Joclyn 4JJ (XYL of Rusty 4JM) was underneath a large gum tree, looking up and saying, "You can come down now Rusty, all those noisy Biloela Hams have gone away." True.

The gear used included mobiles on 7 Mc. and 6 metres and fixed stations also on these bands. Herb 4KM arrived on Sunday morning, complete with Alma and kids ,and Australia's best car. Good cars eh Herb? Mine goes well also. Herb has the last thing in electric fences around his property, and believe me, it's efficient. Has a very "science fiction" sound about it. Something like you would expect to see in Dr. Who. Of one thing I'm sure, I wouldn't open a gate on Herb's property. It's the most lethal looking machine I've ever seen.

Monday morning saw the arrival of Alf 4OL and XYL (as I left Sunday afternoon, I missed seeing them). It is very possible that this experimental outing may become an annual event. The site chosen is very good, plenty of shade and lots of room and tall trees for aerials. Also, it is well and aptly named. Ceradatus is the name of the Lungfish. They have no gills and have to stop swimming and come to the surface in order to breathe. Far be it for me to even suggest that Hams can talk and breathe at the same.

A new Regional broadcast station has been opened at Eidsvold, and an inspection of it was made by Doug 4PG and some of the convention. They spoke highly of the courtesy of the technician who showed them around. They must have omitted mentioning my name, otherwise they may have been thrown out, seeing that I have deserted steam radio for t.v. I believe that there is a rumour afloat that I have given away Ham Radio for gardening. Well blokes, it's true. I haven't even got a receiver. But after this convention, the bug is sort of biting again. 73, Uncle Xray.

TOWNSVILLE AND DISTRICT

It is with regret that I have to pass on the sad news that Eric 4EL has joined the ranks of the "Silent Keys." A few of the old timers were present at the funeral. Eric will be remembered by them as one who was at all times willing to lend a helping hand. To his wife and children we offer our deepest sympathy.

At the last meeting of the T.A.R.C., the President and Vice-President failed to turn up so the meeting was adjourned and instead a night of films took its place. It was pleasing to note that the interest of the Lower Burdekin boys is still being maintained in the local meeting as they have to journey over 100 miles round trip.

Visitors this month were Bill 2ABR, who stayed some time to see all the changes that had taken place since he was here way back around the late 1920s. He has fallen for our good climate. Methinks that in the very near future he will decide to come back for good. Paul, the VK4 Disposals Officer, blew in for a quick eyeball QSO after touring the far north. Still dreams of the giant clams that he saw in the underwater observatory at Green Island.

Bert 4LB and Merv 4DV very sore after the fortnight slogging through the northern jungles on their yearly stint in the Citizen Forces. 73, Bob 4RW.

SOUTH AUSTRALIA

It's on again, gimmick master PanSy, also known as VK5PS, is away on holidays, not that he isn't mostly holidaying somehow or another, but at this time of the year is actually away from home and work and goes places, one such being the hills resort where financial genii gather each Easter. As usual he set up in the nurses' quarters, and finding a convenient tree, attached a dipole to which he fed the trusty type 3, and guess what? He applied a mode of modulation to it that was a complete surprise to all that tried to tune it. First of all it was thought that he had at last "joined the strength," but no, it was not that, then the next guess was that it was f.m., no again, was it pulse? None of us could work it out, finally it was assumed to be something entirely new, so everyone went off to work the easier 2XW, 9Q4 and so on and returned to 5PS later in the day after he replaced the faulty mike with one that made his melodious voice sound nearly normal.

All contacts on that memorable day are asked to QSL in order to receive one of the gold plated cards issued on his DXpeditions, it is understood 3 I.R.C. coupons are needed!!! Any s.s.b. stations in the QSOs need not include coupons for he is very anxious to accumulate a good file of QSLs of s.s.b. contacts, some having been denied him in the past.

Sideband must be spoken of at this point for on the last count the increase in strength of the mode is showing the growth to be even greater than earlier, and in VK5 too. The latest figures are 785 for all VK, with VK5 at 95, it is interesting to note the "old-timers" that are going over to it, and the c.w. types that are finding it more relaxing and more effective.

Without wishing to take up any VK4 space, oh, we are friends are we not, because "he" is away, one must mention Deltahet receivers, otherwise one would not be with it. It is fatal to be in some QSOs these days and not mention such receivers, for they are becoming such a part of the scene these days that it is a must to at least have a knowledge of them. As far as can be seen at the moment those outside the peasant class are Phill 5NN, Dud 2DQ, Eugene 8AV, Al 5EK, John 5LT, Garry 5ZK, 5ZGW and 5ZKA, all of whom have the receivers running or well on the way to that end. So keen is the interest, and so anxious are others to share the interest that a special programme is being arranged for a VK5 monthly meeting when the proud possessors of such home-brew equipment will be coming forward to show and explain them to us. Yes, even you Dud, so watch for a telex soon.

The pre-Peyton Place net, that always includes Nobby 5WK, Lee 5BH and Ron 5KS have recently had to re-arrange their r.f. gain controls with Ron having moved to the city from Riverton. And by the way the Admiral 5VB gained from Ron's move by acquiring the Riverton s.s.b. rig, so that Ron can proceed to drive himself up the wall again by building an exciter to end all exciters, this time using a mechanical filter. A glutton for punishment is our Ron.

Tubby 5NO is packing up to leave VK5, and will probably be heard very soon with a European prefix for a while. He has disposed of most of his gear. Will be replacing it with "the strength"! His drive will be missed from the Elizabeth Club in whch he has been active since coming to this state. We all wish him well in his new sphere and hope also to hear him soon with his roving call (ON5 maybe). Just who will volunteer to take his place in VK5 in contest participation, for his contribution in that field has been a valuable one to the Division.

Mention must be made of the excellent work being done by Mac 5MM in the matter of slow morse instruction and practice for the many undergoing that part of their studies. Night after night on 52 megs. Mac pounds away at it and as a result of his work a number of "students" expect to crack it at the next try. A pat on the back from us all, Mac.

By the way, next time a Federal Convention takes place it is hoped that VK5 will send Pansy as an observer to companion the one sent last time by VK3.

The last meeting of the VK5 Division was a lecture night when Mr. John Butler spoke on "Ionosonde" installation operating at W.R.E. and displayed a model of the antenna system, which he called two half rhombics. They were suspended from a lattice mast and the wire which normally would have become the top guys was in fact copper, forming the antenna. Normal Guys elsewhere. Measurements are taken at frequencies from 1.6 megs. to 20 megs. by an ingenious system starting with a v.f.o., and when one member suggested acquiring it, it was hands off. Films and prints showing the reflected signals were displayed and explained and a block diagram, measuring about 5 by 4 feet was displayed to demonstrate how the various oscillators (there were at least two fixed frequency oscillators in it) all played their part. The lecturer also spread out on a table a schematic of the circuitry which was even larger than the block diagram. A most informative talk and introduced some new techniques to many.

Reference was made to the publicity given to the Australian satellite by Geoff 5TY, when he quoted that some misleading information had been published so he gave actual figures. It appears that two representatives from the Melbourne University Astronautical Society had flown up to Brisbane to seek W.I.A. Convention support for their project, the convention had agreed to give support to a certain financial limit. No doubt this will appear elsewhere in due course.

There was no need for the caretaker's dog to do his usual scare-out job after the meeting, for with no Pansy it finished by 10.30 p.m.

Did you know that Ian 5IZ has come by a 7146 crystal? Sounds like a 40 metre broadcast of the Divisional notes soon, and judging from the experimental relay last week we can expect a good coverage of that frequency in future. It is many years since 7146 was regular in the matter of either original broadcast or relay.

5ZF heard saying the other day that he was going to try s.s.b. on 14 Mcs. soon, apparently he had a good go on c.w. and whilst pleased with the result was going to join the gang!!

Amonsgt those present at the last meeting were 5UJ of Whyalla, 5UX (until recently 8UX) who has now returned after five years at Alice Springs—and wishes he was back there too—and Len 5YF who was talking of "when he takes up radio again," there is still some hope, Len.

Important visitors to this QTH (Gawler) recently include Den 7DK, well known to most VK5s. He was on a tour holiday and passed through here on his way to Broken Hill, whose ramparts of democracy are so ably defended by Dud 2DQ, Den was mobile 80, 40 and 20 s.s.b. with a Galaxy and also on a.m. with a H.B. rig, both being powered by a solid state device, and feeding into H.B. helical whips. All excellently made and fitted. Oh yes, there was room in the front seat for his XYL, but it was noted that she was confined to her side. It was learned later that he went out to Steven's Creek which is 9.99 miles from the Hill, or is it the entertainment centre that is that distance By the way, if any of you Galaxy chaps have trouble with the dial drive vibrating when in motion just ask Den or Dud and they will let you into a secret, and give the solution.

The Gawler "Happy Gang" have little to report this time, for apart from the DX work of Les 5AX, who mostly calls CQ and stands back for the choice calls, the rest here have been messing about with v.h.f., which of course may or may not be reported elsewhere. If anyone has a reasonably recent copy of the call-book that they don't want, then send it to Les, for when reading the mail recently he was trying to find Bob's 5ZDX address, and on reference to the only copy of the call-book he had it was noted that Bob's call was not listed.

Heard 5HH telling how he caught a 34-lb. cod up the river somewhere, and noted that he was in no way encouraged by Hughie 5BC who said that somewhere in the local paper he read about a character at Waikerie who got a 70-pounder. Worse than quoting you have 290 countries to someone like Stew. 5MS! 5LG and 5CV got into a mixed up contact one evening, starting on antenna it drifted to fishing and grandchildren. George tells some good fish stories but it would not do to tell the game warden what George put over. They even waxed historical a bit. Quite interesting. Ian 5IZ putting up beams and has some 2000 feet of wire strung up over about 3 acres, with about 800 feet of feed line, plus a tower some 60 feet high. What a "farm," easy to see he is not a suburban type.

A recent evening produced an unusual complaint. A chap complaining of QRM. Nothing unusual about that you say, O.K., but this complaint had to do with gas mains, and that one I leave to your imagination, or best we have Pansy deal with it next month.

At the beginning of A.R.R.L. V.H.F. Handbook is the following: "How it all started . . . and if you think the beam you are using is a recent development, consider the fact that Hertz used a rudimentary form of Yagi in 1888 and Marconi employed a parabolic reflector to extend the range of his equipment before the turn of the century." All sounds like nothing new under the sun, does friend Yagi turn over at this?

Heard 5JX saying that his XYL was painting the house and that his part of the job was to hold the light. Boy has he seen the light. A voice in the background of a 3.5 meg. transmission, "You are coming in on the B.C. receiver inside"—momentary silence, then, "Well you can switch it off." How is that for a quick means of overcoming B.C.I. in one lesson– No names mentioned.

5TU has done some research lately and comes up with the result that about 98% of his contacts, on request, admitted some association with photography and now suggests an operating position in the dark room as a possibility. 5DR has advised that he has been posted to Malaya in June, R.A.A.F. type. That great outdoor man 5JH says he prefers portable operation over lunch time rather than stopping to eat, must eat sometime Vic, all the same he has found an ideal site at Lady Bay near Normanville. Another mobileer is Max 5GF who was a Victor Harbour over the

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1P5 50c	6AM6 $1.00	6S5 75c	12SG7 75c	EA50 40c
1Q5 50c	6AN7A $1.65	6SA7 75c	12SK7 50c	ECC35 $2.00
1R5 $1.90	6AR7GT $2.10	6SC7 75c	12SN7 75c	ECH33 $2.00
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1S5 $1.60	6AU6 $1.45	6SF7 75c	12SR7 50c	EF39 50c
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1U4 $1.60	6AV6 $1.40	6SJ7 $1.25	16A8 $2.10	EY91 50c
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3A5 $1.00	6BX6 $1.45	6U8 $1.70	58 50c	VR135 50c
3Q5 $1.00	6BY7 $1.45	6V4 $1.14	80 $1.70	VR136 50c
3S4 $1.00	6BZ6 $1.60	6V6GT $1.75	717A 75c	VR137 50c
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Easter week-end with a real man-sized 60 watts on a.m., not satisfied with this he is proceeding with a 100 watt rig, what then Max?

Tom 5TL did some shovel work (horrible word) over Easter, shifting some concrete slabs and got to work on five tons of sand to level and top dress some lawns. First he had to buy a shovel! The blisters were free, but now that the job is done, and that he has seen the light, who wants a shovel, no immediate enquiries will mean it will appear at the next buy and sell night. In spite of all this his weight did not reduce.

5FR does some good mobileering while travelling to work, quite an idea and recently had a good contact with a VK3 near Geelong, good signals it is understood but Bill was hampered by doing it on the Anzac Highway, not the best of places for that job.

Jack 5LN has gone over to the "man's mode" and even fixed a product detector for Athol 5LQ, over to you Athol for the next move, but don't treat it like your 3-element beam job.

"IT" will be back next month, chaps, my sympathy to you all. 73, Comps VK5EF.

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WESTERN AUSTRALIA

A happy Pancake Saturday to you all, and greetings and congratulations to the new VK6 Council. I say "new," although there are only two new faces, quite a vote of confidence in those who served us so well last year!

It is with deep regret that we record the passing of Alan Buckie VK6AB. He will be greatly missed, not only by those who worked with him on the bands, but by his many friends throughout the country areas.

News to hand that Doc 6AQ has been on the move to see some of our Eastern neighbours. Possibly the chance to see some good football for a change, caused the brief stopover in VK3. Hope you were able to round up a couple of leak-proof pens for the satellite recorders while you were at it Doc.!

There should be some noticeable QRM from the Mandurah area now with both Jack 6BU and Lance 6LR in the same street. Now take it easy men, one at a time please.

A recent visit to some of our country Hams confirmed that the busy bees at Narrogin are particularly active. I understand that Ian 6XX has his new beam mounted on top of a mighty tower and was recently heard working W's on 10 metres.

Further east at Wickepin, Aub 6XY has been crouched over text books and drawing board and has come up with a new filter type sideband rig which promises to be an extremely good one.

Also roaming at large around the countryside, Jack 6RT operating portable. Disguised as a quartermaster, he operated as communications officer on a tour of the north-west. Also aiding and abetting him was a bus-load of students.

Reports from Y.R.C. leaders indicate an upsurge of interest here in the west. Good luck boys—and girls—hope to see many of you on the bands soon.

It was very pleasing to see a couple of YLs gracing our meeting recently. What a pity I couldn't talk them into forming a supper committee. Talking of supper reminds me of Cyril 6CR and it is hoped that he is enjoying better health. Perhaps we will see you at a meeting or on the breeze soon Cyril.

The aforementioned YLs became interested in Ham radio as a result of visiting the shack of Brian 6VW during the last Scout Jamboree of the Air. After some able coaching by Brian they sat for the April exam. Nice work, girls.

Len 6LG, who has also been in indifferent health for some time, appears to be hitting his straps again—just in time to do battle with that cursed Guildford grass—eh, Len?

Another old-timer enjoying a new lease of life, and incidentally, some good DX too, is Frank 6FL. When last seen Frank was smiling happily at the success of his newly-erected beam, and quite rightly so after hearing some of the reports he has been receiving.

Heard Jim 6RU chewing the rag the other evening—on 80 metres too! I gained the impression that he enjoyed the experience almost as much as hunting rare DX.

There is still considerable interest being shown in W.I.C.E.N. although the struggle to receive official recognition is a long, hard one. Meetings with the appropriate authorities are still going ahead.

With the onset of winter it is hoped that more life will appear on 80 m. during the evenings, notwithstanding the cold, draughty shacks and the ever-present lure of the one-eyed monster.

A recent visitor to our sunny (?) shores was "The Admiral," officially recorded as Vern VK5VB. We hope that both Vern and his XYL benefit from their brief stay in Sandgroper Territory.

Our Federal Councillor, Roy 6RY, is still raving on about the many attractions of Queensland—it sure must have been a beaut. convention! We certainly can't hope to match some of the things he has told us about.

Popular rumour has it that many of the v.h.f. boys are secretly preparing for the launching of Australia's first satellite. It looks as though the d.c. lads might get a look in this time on 28 Mc. How about that, you v.h.f. guys? Hi!

From reports given at our annual meeting it is pleasing to note that prospects for the forthcoming year look particularly encouraging. The recent drive for membership has netted the Division some 60 or so members in 11 months.

Sunday morning news broadcasts have reached an all-time high, with services on 160, 80, 40, 20 and 6 metres f.m. A new service recently introduced is directed to our members in the far north and at Cocos and Christmas Islands. Fine business Bob 6BE and relay station operators Brian and Peter 6ZEP.

The march of progress has swept up Bill 6WY and he had constructed a new sideband rig for portable use at his shack at the Moore River. Next thing we know the dustmen will be complaining about the weight of all these AT5s that are being consigned to the rubbish bin.

Another welcome voice back on the band is that of our Patron, George 6GH, and we are hopeful that you will continue to enjoy improving health.

Somebody stop me quickly or I will be taking up too much space! Thanks, now I can bow out quietly.

With a call sign like mine it would be a piece of cake to sign as "DAisy," but in deference, or difference, or something to our esteemed friend from VK5 I will endeavour to contain myself. 73, Ross VK6DA.

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TASMANIA

What a month this April has been, I seem to have been out more nights than I've been home, not only the usual meetings, but two extra Council meetings as well, and no muckin' about either, all business, the last one towards the end of the month, going till around 11.30 p.m. I think every member of Council is on some other committee or sub-committee dealing with institute business, so none of us look like getting any real let-up for a few months yet — still we don't complain (only grumble), especially when one's efforts show signs of bearing fruit (who's talking about gardening?).

With any luck as many councillors as possible (it looks like six of us at this stage) will have visited the north-west, northern zones by the time you read this. The idea being to explain to members (and answer their questions) the meaning of Federation, and its effect on the Institute as we know it at present.

Which brings me to the next subject on my list which happens to be the Easter Convention which was held in Brisbane. From what Ted 7EJ tells us he had a right royal time, and although several agenda items were rather contentious matters, and agreement could not be reached, the convention as a whole, and the cordiality shown visiting councilors by VK4 was excellent, let's hope we in VK7 can do as well if not better in '67, when we are the hosts to the other Divisions.

Pencil bookings have already been made for accommodation at one of Hobart's hotels for next Easter, and if the way the last five months have flown continues, it won't be long before next March is upon us. Incidentally, we had fears prior to Easter that we might lose Ted 7EJ to VK8, but I'm pleased to inform you, he's not going (who said "What a pity?").

What a great boost was given the W.I.A. with the publicity in the press and on radio and T.V. regarding the "Australis" satellite project, our congratulations to all concerned, both with the actual project itself and the publicity.

At the Amateur Advisory Committee meeting in April a change of form was decided upon, the idea is that members work in pairs when in doubt regarding splatter, etc., especially with s.s.b. stations, just in case one's receiver is at fault, incidentally, if at any time you get an on-air comment from any member of the A.A.C. (or anyone else for that matter) take it in good part and do the right thing!!

Ian 7ZZ told me tonight that he has at last got a W5 confirmed (Mississippi) after six years, and now has his W.A.S. He said he has worked 126 countries but worst luck, they're not all confirmed. DX has been extra good of late on 15 and 20, with openings to Europe especially.

Now for a few tit-bits, Dave 7ZAI has changed his job (transferred to another branch within the department) so you can talk to him again now chaps, he's no longer the monitor! Den 7DK is at the time of writing away on the mainland, and Charlie 7KS is off to Sydney within the next couple of days (don't know for how long). He has been very busy of late, doing a complete rebuild, yours truly is rebuilding also, expect it will take most of the winter months. I hope to be "all systems go" by next summer's DX season, as well as having my c.w. by then, at least six of us so-called "half fulls" hope to be "full fulls" (fools) after the July exams.

That's about it for this month chaps, except to remind you that the "R.D. Contest" is not very far away, only a couple of months. Also, if you are still unfinancial, then brother this will be about the last lot of piffle you'll read of mine (that's if you ever do read it). 73, Geoff 7ZAS.

NORTH WEST ZONE

The last meeting of this Zone took place at Lakin's Hall, Ulverstone, on 3rd May in the form of a social affair with 17 persons present. Brian 7ZBE gave a very instructive lecture on transmission lines and showed the gathering the importance of a low reflected reading along the line and went on to show, by a practical demonstration, of s.w.r. measurements, using a 2 mx transmitter coupled through a moni-match to a yagi beam. Brian explained the set-up and by varying the adjustment of the gamma match on the antenna, was able to prove his previous theory on s.w.r. readings and what have you.

After Brian had stepped down, Sid 7SF produced an expensive looking movie projector which turned out to be one he had borrowed for the evening, and not as every one had surmised, the result of rifling the tin on top of the wardrobe! Anyway, members were shown two very good films dealing with civil defence and nuclear explosions.

Supper was served 7ZRS/7MS style and one of the bits of gossip I managed to gather was the fact that George 7XL has now attired himself in a red spotted cravat and spiked shoes and joined ye old diehards of turf digger uppers, and can be heard yelling "fore" whenever his powerful shoulders send a ball flying in the wrong direction!

Ken 7AI has now notched up 400 hours solo flying—or was it 400 db's worth of effort I can't quite remember which!

Ken 7KH has that rx chassis still sitting on the bench ready to be wired. Looks like you will have to give up working the Gs on 20 mx a.m. Ken and get down to some unfinished construction work. 73, 7MS.

NORTHERN ZONE

Since the last notes local activity has been a little better and the meeting turnout is higher, but we still have a long way to go to break any records. What about it chaps? At our last meeting we welcomed two new members and an old member who has decided to rejoin. They were Carl Waldron and Bob Jackson with Don 7DB joining our ranks again. Sorry to hear that shift work interfers with the meetings, Don, but let's hope that you can make it now and again.

Bob Jackson is associated with the Civil Defence Organisation and provided the key to a long and interesting discussion on the W.I.C.E.N. activities. The result of this was to get everyone to combine on a picnic at some future date and carry out an exercise. I am sure that we are open to any suggestions that can be put forward.

Peter 7PF is going to give us our lecture at the next meeting on s.s.b. or "The Thing" as some refer to it. So come along and maybe we will see a little bit of wisdom in all that madness.

Bevan 7ZBW has returned from the big island and I believe that he was impressed by the gear he saw in the shacks over there. A few feet of film was run and at last report he was cutting all the juicy bits out, so he might even show us his trip. Anyway, Bevan, I'm sure that we all thought of you while you were away.

7ZLX has moved a new shack to his QTH and is very busy setting up his gear, along with constructing new equipment. Den 7DK has returned from his trip to the mainland with the car in one piece. The whip could not have made the car as top-heavy as I thought. Nice to hear your comments on the activity in VK3-5, Den, and also that you have had nearly as many contacts as my whole log shows. Also I gather that 3ZER did a remarkable job of keeping you occupied while he played host. I believe you found the hospitality on your trip to be lacking nothing. Well if that isn't a plug for the mainland what is?

That's all for the moment except that the next meeting requires yours and my attendance. See you there. 73, Frank 7ZFR.

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Brand new. OC72, OC44, 2N132, OC66, OC45, 80c each. AT1138 Power Transistor, 30w., Class B, $3. Also Diodes: OA71, OA81, OA95, 35c each.

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Beginners are welcome, ask Jim and Laurie Gardiner any questions. They are Amateur Radio operators and will be only too pleased to assist.

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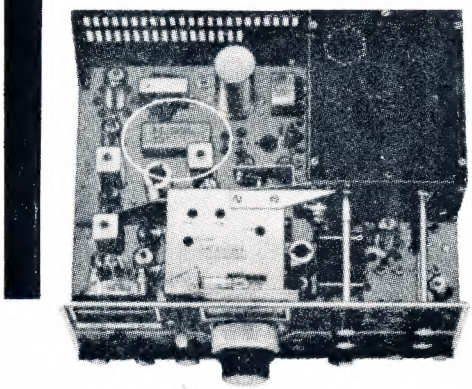
IF YOU'RE LOOKING FOR SELECTIVITY

LOOK INTO THE SWAN-350

AND ITS HIGH FREQUENCY CRYSTAL LATTICE FILTER

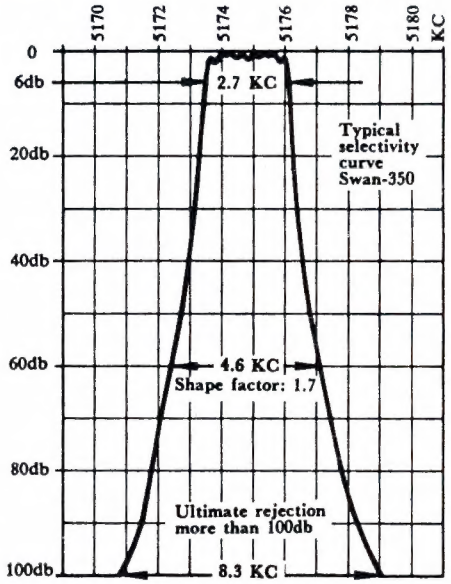


One of the reasons why the Swan-350 is the top selling transceiver today is its exceptional selectivity provided by a new crystal filter which we began installing in all production units a few months ago. This amazing little gem is made exclusively for Swan by C-F Networks. The selectivity it provides for voice communication is as good or better than the selectivity provided in any other sideband equipment, regardless of price.

There are 3 important factors about a filter which determine what the overall selectivity will be. One of these is its **bandwidth** at the 6 db points, and here we have carefully selected 2.7 kc. in order to give you good channel separation, and still retain the smooth, natural audio for which Swan transceivers are so well known.

The next consideration is **shape factor**, or the ratio between bandwidths at 6 and 60 db. In this respect the Swan filter gives you a "shape factor" of 1.7 to 1. This is substantially better than the 2 to 1 ratio of the mechanical filter, or 3 to 1 of the average 9 Mc. crystal filter. Best shape factors are achieved right around 5 Mc., and this is one of the main reasons for selecting 5175 kc. for the Swan I.F. (This choice of I.F. also permits single conversion design which results in fewer images and spurious signals. The only thing better than single conversion is no conversion at all.)

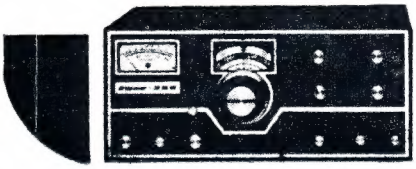
The third important factor, but by no means the least, is the measure of **ultimate rejection**, or how far the skirts fall before flaring out. Take a look at the graph and you'll see that this is better than 100 db with the Swan filter! Ultimate rejection determines how well your receiver attenuates those strong adjacent channel signals,



especially the guy down the street with the big linear. In this respect, the Swan filter is superior to others being used in Amateur sideband gear.

In Swan transceivers, the filter is also used when transmitting, of course, and in this mode the shape factor determines what your unwanted sideband suppression will be. We have been advertising 40 db, but this is a conservative figure, since it is really better than 50 db. Also, we've been advertising only 400 watts PEP input to the 350, but actually the average production unit peaks over 500 watts before flat-topping, which is why the 350 gets out so well, and sounds so good. Compare these features with any other sideband transceiver, and they all sell for more money!

73, Herb Johnson, W6QKI.



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